

Clark County

Department of Air Quality



CONSTRUCTION ACTIVITIES DUST CONTROL HANDBOOK

ACKNOWLEDGEMENTS

This Handbook includes the procedures for obtaining a Dust Control Permit and the development of the accompanying Dust Mitigation Plan. This Handbook is included by reference in Section 94 of the Clark County Air Quality Regulations. This Handbook replaces in its entirety the current Construction Activities Notebook that includes the Section 94 Handbook. These documents were produced to facilitate the development of a comprehensive construction activities program within Clark County to address the mitigation of PM₁₀ (particulate matter less than 10 microns in diameter) impacts as the County continues to grow and prosper.

The original Handbook was prepared by the Clark County Health District–AQD and Clark County Department of Comprehensive Planning, with the guidance of the Particulate Matter Emissions Control Research Advisory Committee (PM Committee). The Clark County Department of Air Quality (DAQ) has completed this revision of that document. External and internal workshops and meetings were held for both the private and public sectors to develop, revise, and publish these documents. An abbreviated list of contributors to this process is included below.

Allstate-Nevada Environmental	Korte-Bellew Construction
American Asphalt	Lake at Las Vegas
Apex Industrial Park	Las Vegas Paving Corporation
Association of General Contractors	Las Vegas Valley Water District
Broadbent & Associates	Meadow Valley Contractors
Chemical Lime Company	Mel Clark, Inc.
City of Boulder City	Meranto Construction
City of Henderson	MGM Grand Hotel & Casino
City of Las Vegas	Nevada Contractors Association
City of North Las Vegas	Nevada Department of Transportation
Clark County Department of Air	Nevada Division of Environmental Protection
Clark County Department of Aviation	Nevada Power Company
Clark County Department of Public Works	Nevada Underground, Inc.
Clark County Health District-Environmental	Pentacore Engineering, Inc.
Health Division	Perini Building Company
Clark County Regional Flood Control District	Perma-Built Homes
Clark County School District	Sanders Construction
COLGENCON	Sandia Construction
Concordia	Scientific Applications International Corporation
Conservation District of Southern Nevada	Soil Tech
Converse Consultants	Southern Nevada Homebuilders Association
Copper State Emulsions, Inc.	Southwest Gas Corporation
Creel Farms	Standpark Homes
Del Webb	Underground, Inc.
Envirocon	U.R.S. Corporation
Geotechnical Environmental Services	U.S. Homes
Golden West Industries	Weaver Construction
Goldie, Inc.	
Granite Construction	
J.A. Jones Construction	
J.M.B. Construction	
Kalb Construction	
Kaufman & Broad	
Kerr-McGee	
Kleinfelder	

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ACRONYMS/DEFINITIONS

ASHTO - American Association of State Highway Transportation Officials

DAQ - Clark County Department of Air Quality

ASTM - American Society for Testing and Materials

Bulk material – Any material, including but not limited to, earth, rock, silt, sediment, sand, gravel, soil, fill, aggregate less than 2 inches in length or diameter, dirt, mud, demolition debris, cotton, trash, cinders, pumice, saw dust, feeds, grains, fertilizers, and dry concrete, which is capable of producing fugitive dust at an industrial, institutional, governmental, construction, and/or demolition site.

Control Measure – An action or practice employed to comply with a Control Requirement.

Control Requirement – A summary statement of the regulation requirements pertaining to a particular activity or action.

Dust Palliative – Hygroscopic material, non-toxic chemical stabilizer or other dust palliative material which is not prohibited for ground surface application by EPA or NDEP or any applicable law or regulation, as treatment material for reducing fugitive dust emissions.

Dust Suppressant – Water, hygroscopic material, solution of water and chemical surfactants, foam, non-toxic chemical stabilizer or any other dust palliative which is not prohibited for ground application by the EPA or NDEP or any applicable law or regulation, as treatment material for reducing fugitive dust emissions.

EPA – Environmental Protection Agency

NDEP – Nevada Division of Environmental Protection

Freeboard – The distance measured from the top of the side of storage area of a truck to the fill line.

Opacity – A visual measurement of the density of a particulate matter such as soil dust when suspended in air. Opacity is evaluated using specified test methods.

Optimum Soil Moisture Content – The water content at which soil can be compacted to the maximum dry weight by modified compactive effort using ASTM D 1557 for Optimum Soil Moisture Content/Maximum Density.

PEP - Particulate Emission Potential

Silhouette Area – The area of a shadow produced if a light was shown directly from the opposite side of an object.

Stable, and Stabilized – Stationary soils are considered stable or stabilized when they are in compliance with the standard set forth per Regulation Section 90. Soils that are being actively handled or disturbed by construction related activity or off-road construction traffic and vehicle parking are considered stable or stabilized when they are in compliance with the opacity and plume limitations set forth per Regulation Section 94. Unpaved haul roads are considered stable or stabilized when they are in compliance with standards set forth per Regulation Section 91. Test methods for stability are expected to be used when necessary, but are not required to be utilized continuously during active construction activity.

Staging area – Any portion of a construction project used for storing materials, parking vehicles, and equipment; may be a separate area from the main construction project area.

Surfactant – A compound or element that reduces the surface tension of a liquid. The term is used in this document to describe wetting and spray adjuvants designed to promote the economical application of water to hydrophobic soils. Surfactants prevent drifting, decrease run-off, increase the penetrating and wetting properties, and promote more even, consistent spray patterns.

Tack coat – An asphaltic material applied as a binder to Type II Aggregate prior to the placement of asphalt during road construction.

Tackifier – A substance mixed with water that binds together mulches, small particles, or other dust palliatives without forming a hard crust. Many dust palliatives, in a more dilute concentration, can be used as tackifiers.

Trackout – Soil on paved roadways deposited from vehicles that have passed from a construction site or from an unpaved access route onto the paved surface.

Type II Material – Base Aggregate as defined in Section 704 of the Uniform Standards Specifications for Public Works' Construction Off-Site Improvements, Clark County Area, Nevada.

Wheel shaker – A device capable of spreading the tread on tires and shaking the wheels and axles of vehicles for the purpose of releasing mud, soil, and rock from the tires and undercarriage to prevent tracking those materials onto paved surfaces.

Wheel washer – A station or device, either temporary or permanent, that utilizes a bath or spray of water for the purpose of cleaning mud, soil, and rock from the tires and undercarriage of vehicles to prevent tracking those materials onto paved surfaces.

Wobbler - Type of sprinkler head designed to minimize evaporation of water by enhancing the horizontal spray pattern.

INTRODUCTION

This Handbook replaces in its entirety the current Construction Activities Notebook that includes the Section 94 Handbook.

The Clark County Department of Air Quality (DAQ) regulates construction activities that disturb soil in Clark County, Nevada. A Dust Control Permit for Construction Activities (Dust Control Permit) is required for most soil-disturbing projects.

An approved Dust Control Permit must be obtained before soil is disturbed. Dust Control Permits are valid for one (1) year. If a project continues for more than one year, the permit must be renewed prior to expiration. DAQ must be notified within 10 working days after the completion of a project. Each Dust Control Permit application must have a Dust Mitigation Plan outlining control measures to prevent fugitive dust. Control measures are based upon soil type and project activities. Soil types are classified based upon particulate emission potential (high, moderate high, moderate low, low, and slight). Guidelines and maps are provided within this Handbook.

Fugitive dust emission violations are strictly enforced. Permittees and contractors are responsible for controlling dust on their projects 24 hours a day, 7 days a week; there are no exceptions. Violators may be required to pay penalties or possibly suspend operations until the fugitive dust is mitigated on the construction sites.

This Construction Activities Dust Control Handbook provides a guideline for obtaining a Dust Control Permit and developing a Dust Mitigation Plan. The Construction Activities Dust Control Handbook is included by reference in Section 94 of the Clark County Air Quality Regulations. The Construction Activities Dust Control Handbook has been divided into the following segments:

GENERAL INFORMATION:

- a. Dust Control Permit Requirements (DCP).
- b. General Construction Project Activities (GEN).

BEST MANAGEMENT PRACTICES:

- a. Soil Particulate Emission Determination Charts and Maps.
- b. Best Management Practices (BMP) for Construction Activities.

APPENDACIES:

- a. Appendix A - Dust Control Permit Supplemental Forms.
- b. Appendix B - Supplement to Dust Control Permit Mitigation Plans.

ATTACHMENTS:

- a. Attachment 1 - Dust Control Permit Forms.
- b. Attachment 2 - Dust Suppressant/Palliative/Surfactant Information.
- c. Attachment 3 - California Air Resources Board (CARB)-Approved Abrasives Information.
- d. Attachment 4 - Dust Control Permit Signage.
- e. Attachment 5 - Air Quality Regulations.

**Dust Control Permit Application
Summary****REQUIREMENTS**

- Permit required for soil-disturbing projects greater than or equal to 0.25 acres.
- Permit required for demolition of any structure greater than or equal to 1,000 sq. ft.
- Permit required for trenching operations greater than or equal to 100 feet in length.
- **Construction BMP *Control Requirements* must be addressed by *Control Measures***
- **Construction BMP Control Measures must be followed for every soil disturbing or construction activity.**

CONTROL MEASURES

1. A Dust Control Permit is required for projects with the following dimensions:
 - a. Soil-disturbing or construction projects greater than or equal to 0.25 acres;
 - b. Trenching projects greater than or equal to 100 feet in length; or
 - c. Mechanical demolition of any structure larger than or equal to 1,000 square feet.
2. **Dust Control Permits may be issued to the following persons:**
 - a. Property owner or authorized designee; or
 - b. Representative of a municipality that owns the property.
3. **Dust Control Permit requirements:**
 - a. Submit a complete application that includes project vicinity and assessor's parcel maps (see Attachment 1: Dust Control Permit Application Form DCP01). Permit applications should be submitted to the DAQ offices at 4701 W. Russell Rd., Suite 200, Las Vegas, NV 89118-2231.

DUST CONTROL PERMIT APPLICATION SUMMARY (continued)

DCP 01

- b. For soil disturbing or construction projects greater than or equal to 0.25 acres, a *Dust Mitigation Plan* using the Best Management Practices in the Construction Activities Dust Control Handbook must be submitted. Control Measures must be selected to meet all Control Requirements. Consider project conditions and logistics when identifying and selecting Best Management Practices and Control Measures (see Attachment 1: Dust Control Permit Forms).

A *Supplement to the Dust Mitigation Plan* is required for soil disturbing or construction projects 10 acre or larger in size, trenching activities one (1) mile or more in length and structural demolition using implosive or explosive techniques (see Appendix B: Supplement to Dust Control Permit Mitigation Plans). This required supplement will detail the Dust Mitigation Plan and include the Project Description, Control Measures drawn from Construction Activities Best Management Practices, Site Plan, Soil Stabilization Measures, and Employee Dust Control Training and Compliance.

- c. Any construction project having more than 50 acres of actively disturbed soil at any given time is required to have a Dust Control Monitor as described in Section 94.7.5.
 - d. The construction site superintendent(s), foremen or other designated on-site representative(s) of the project developer, as well as the water truck/pull driver(s) for each construction site, are required to successfully complete a DAQ Dust Control Class and possess a current Dust Control Card.
- 4. A Dust Control Permit sign must be conspicuously posted on every construction site (see Attachment 4: Dust Control Permit Signage).
 - 5. Copies of the Dust Control Permit, including the Dust Mitigation Plan and related maps, must be supplied to all contractors and subcontractors. A complete copy must be kept at the construction site at all times.
 - 6. Notifications:
 - a. Notify DAQ of any proposed modifications to the Dust Control Permit, including the Dust Mitigation Plan. Submit an Application For Dust Control Permit Modification form DCP06 (see Attachment 1: Dust Control Permit Forms); and,

DUST CONTROL PERMIT APPLICATION SUMMARY (continued)

DCP 01

- b. Inform DAQ within 10 working days of project completion and final site stabilization. Submit a Certificate of Completion form DCP08. (See Attachment 1: Dust Control Permit Forms).
- 7. DAQ typically issues Dust Control Permits for Construction Activities within 10 working days of receipt of complete application. Adequate time for application processing must be provided. Emergency measures are exempt from permitting requirements, but are not exempt from the application of dust mitigation measures or the use of Best Management Practices.

DAQ Dust Control Class**REQUIREMENTS**

- **The construction site superintendent(s), foremen and other designated on-site representative(s) must attend Dust Control Class.**
- **The water truck/pull driver(s) for each project must attend Dust Control Class.**

CONTROL MEASURES

1. The construction site superintendent(s), foremen and other designated on-site representative(s) of the project developer, as well as the water truck/pull driver(s) for each construction site, are required to successfully complete a Clark County Department Air Quality & Environmental Management Dust Control Class or possess a current Dust Control Card.
2. Dust Control Card must be renewed every three (3) years.
3. The content of the Dust Control Class includes information on completing Dust Mitigation Plans, health effects of particulates, Clark County Air Quality Regulations, enforcement, and pertinent dust mitigation measures.
4. The Dust Control Class, including a written exam, typically lasts three to four hours. Contact DAQ at (702) 455-5942 to register for a class time. Evening and Saturday classes may be arranged through DAQ to provide instruction for larger groups. This service is provided to any group, including contractors and subcontractors, wishing to certify more than 15 employees at one time.

DAQ Dust Control Permit Signage**REQUIREMENTS**

- The Dust Control Permit sign must be placed in a conspicuous place on the project site prior to commencement of construction activities.
- The “*Dust Control Matters*” phone numbers posted on the Dust Control Permit sign must be for a person who can be reached during evening and weekend hours.

CONTROL MEASURES

1. The Dust Control Permit sign must be placed on the project site and must be conspicuous to the public. The “*Dust Control Matters*” phone number posted on the Dust Control Permit sign must be for a person who can be reached during evening and weekend hours.
2. Each Dust Control Permit aggregating from 0.25 acres up to and equal to 10 acres must install a sign on the property prior to the commencement of construction. This sign must measure, at minimum, four (4) feet wide by four (4) feet high, conforming to DAQ policy on Dust Control Permit Design and Posting of Signage (see Attachment 4: Dust Control Permit Design and Posting of Signage).
3. For each Dust Control Permit aggregating more than 10 acres, a sign must be installed on the property prior to the commencement of construction. This sign must measure, at minimum, eight (8) feet wide by four (4) feet high, conforming to DAQ policy on Dust Control Permit Design and Posting of Signage (see Attachment 4).
4. Projects less than two (2) weeks in duration may request a waiver of the requirement of posting a Dust Control Permit sign.

Dust Control Permit Modifications**REQUIREMENTS**

- **Modifications must be made on a Dust Control Permit Modification form and submitted to DAQ for approval.**
- **If the modification is in response to a CAO, it must be noted on the modification form, and corrective action must take place as directed.**

CONTROL MEASURES

1. Modifications to the Dust Control Permit can be made with DAQ approval.
2. A Dust Control Permit Modification application form must be submitted to the DAQ (see Attachment 1: Dust Control Permit Forms).
3. If the parcel changes ownership or you wish to change the permittee during the lifetime of a Dust Control Permit, an APPLICATION FOR MODIFICATION OF A DUST CONTROL PERMIT – TRANSFER OF PERMIT AND/OR CHANGE OF OWNER form DCP 11 (see Attachment 1) must be submitted and approved, proof of ownership must be provided with the Application. This modification does not change the expiration date of the permit.
4. The Dust Control Permit Modification application form must be signed by the permittee or written designee. If a modification is requested for revision of project acreage due to long term stabilization of a portion of a project with a dust palliative, a Dust Palliative Information Form must be included with the modification form (Attachment 1: Dust Control Permit Forms).
5. If the modification is in response to a Corrective Action Order (CAO) issued by the Control Officer or their representative, this should be noted on the modification form. The corrective action must take place as directed. All other permit requirements remain in effect while the modification is being processed.
6. If selected control measures are inadequate to meet the requirements of Section 94.8, Soil Stabilization Standards, of the Air Quality regulations, additional or more stringent standards must be selected. A Dust Control Permit Modification form must be submitted.
7. If the modification adds acreage to the permit, the fees for the added acreage must be included with the application.
8. A modification does not change the expiration date of the permit.

Dust Control Permit Closure/Renewal**REQUIREMENTS**

- Within 10 working days of the completion of the project, the site must be stabilized and a Certificate Of Project Completion form submitted to DAQ.
- Dust Control Permits are valid for one (1) year. If a project is not completed in that time, the Dust Control Permit must be renewed.

CONTROL MEASURES**Dust Control Permit Closure**

Within 10 working days of the completion of the project, a Certificate Of Project Completion form DCP08 must be submitted to DAQ (see Attachment 1: Dust Control Permit Forms). A site visit will be conducted to determine if the parcel is properly stabilized. Upon verification of stabilization, the permit will be closed. If the parcel has not been properly stabilized, the permit holder will be notified of the deficiencies with a Corrective Action Order outlining corrective measures and timelines. Another Dust Control Permit Closure form must be submitted and another site visit will be conducted.

Dust Control Permit Renewal

Dust Control Permits are valid for up to one (1) year. If a project will not be completed before the Dust Control Permit expires, the Dust Control Permit must be renewed. Submit an Application For Renewal Of A Dust Control Permit, form DCP10 (see Attachment 1; Dust Control Permit Forms), to the DAQ prior to expiration of the original permit. The number of acres for the renewal will only include those acres that will be disturbed throughout the rest of the project. Acreage that has been verified by DAQ to be stable or areas that no longer contain disturbed soil need not be included in the renewal. Unpaved staging areas must still be included in the project acreage submitted for permitting.

Dust Control Permit Compliance**REQUIREMENTS**

- **Comply with all Control Measures as required by Air Quality regulations.**
- **Comply with all Control Measures as directed by an Enforcement Officer in a Corrective Action Order.**
- **Comply with all Control Measures listed in the Dust Mitigation Plan of the Dust Control Permit.**
- **Employ BACM in all phases of construction activities.**
- **Comply with Best Management Practices requirements**

CONTROL MEASURES**Section 94 Regulation Overview**

1. All permittees, contractors, owners, operators, or other persons involved in construction activities must employ Control Measures as set forth in the Dust Control Handbook.
2. One or a combination of the following methods must be used to maintain dust control on all disturbed soils and Construction Sites, including all access routes and staging areas:
 - (a) The soil shall be maintained in a sufficiently damp condition to prevent loose grains of soil from becoming dislodged; or
 - (b) The soil shall be crusted over by application of water; or
 - (c) The soil shall be completely covered with clean gravel or treated with an approved Dust Suppressant.
3. The following circumstances constitute a violation of the Clark County Air Quality Regulations:
 - (a) Failure to obtain an approved Dust Control Permit before engaging in activities that disturb or have the potential to disturb soils and/or cause or have the potential to cause Fugitive Dust to enter the air.

DUST CONTROL PERMIT COMPLIANCE (Continued)

DCP 06

- (b) Failure to obtain an approved Dust Control Permit for all areas subject to Construction Activities.
- (c) Failure by an Owner or a permittee to include in his Construction contract with his prime contractor and/or his subcontractors a monetary allowance for any dust control options specified in either the Dust Control Permit or the Dust Mitigation Plan.
- (d) Conducting a Construction Activity as defined by Section 94.2 for which no specified control option is indicated in the approved Dust Control Permit or the Dust Mitigation Plan.
- (e) Failure to perform any duty to allow or carry out an inspection, entry, or monitoring activity required by the Department of Air Quality & Environmental Management.
- (f) Failure to renew or obtain a new permit, prior to a Dust Control Permit expiring, provided the site does not meet the exemption requirements for a Dust Control Permit as defined in Subsection 94.4.2.
- (g) Failure to implement any item that is listed as a "Requirement" in the Best Management Practices section of the Construction Activities Dust Control Handbook for an applicable Construction Activity.
- (h) Failure to implement any Best Management Practice listed in an approved Dust Control Permit or Dust Mitigation Plan.
- (i) Failure to maintain static (not actively worked) project soils with adequate surface crusting to prevent wind erosion as measured by test method "Soil Crust Determination (The Drop Ball Test)" contained in Subsection 94.12, "Test Methods", or alternative control measures approved in the Dust Mitigation Plan.
- (j) Failure to comply with any record keeping or miscellaneous requirements of this Section.
- (k) Failure to maintain project haul routes or haul roads in a stable condition as measured by the test methods outlined in Section 91.

DUST CONTROL PERMIT COMPLIANCE (Continued)

DCP 06

- (l) Failure to have a Dust Control Monitor in place, per Subsection 94.7.5, for a Construction project.
- (m) Allowing FUGITIVE DUST emissions to exceed the standards set forth in Subsection 94.11.1 through 94.11.3.
- (n) Using a dry rotary brush or blower device without sufficient water to limit emissions per Subsection 94.11.4.
- (o) Allowing mud or dirt to be tracked out onto a paved road that exceed the standards set forth in Subsection 94.11.5.
- (p) Failure to comply with any other provision of this section.

Corrective Action Order (CAO)

When a Compliance Officer observes a potential violation of Section 94 regulations, Permitting, or Dust Control for Construction Activities, a CAO may be issued to the permittee and/or persons conducting the activity. Corrective action should be taken as directed. If the corrective action is intended to be a permanent change to the methods for dust mitigation on site, a modification to the Dust Control Permit must be filed by the permittee to incorporate the control measures specified by the CAO as a condition of the permit.

Notice of Violation (NOV)

If a NOV is received, it will be accompanied by a form entitled "Option Letter." The following choices will be presented:

- a. **Contest neither the "facts alleged" nor the "penalty;"**
- b. **Contest the facts alleged in the NOV and request an appearance before the Air Quality Hearing Officer.** This option should be selected if the alleged facts of the NOV can be reasonably disputed. Proper and complete documentation of fugitive dust mitigation measures should be submitted with the option letter; or
- c. **Contest the penalty assessed.** In this instance, the alleged facts are not contested. Only the penalty is considered inappropriate. When appearing before the Hearing Officer the testimony should be focused on the factors regarding the penalty.

DUST CONTROL PERMIT COMPLIANCE (continued)

DCP 06

Appealing a Notice of Violation

If the Hearing Officer rules on the NOV, and you are not satisfied with the results, you may appeal to the Air Quality Hearing Board. The Hearing Board will hear your appeal *de novo*. Therefore, any information you wish to be considered must be brought to the Hearing Board assuming they have no prior knowledge of the alleged facts or penalty.

There is a time limit in which to appeal to the Hearing Board and a "Request for Hearing Before the Air Quality Hearing Board" form must be submitted to DAQ. You will receive an "Order to Pay" from the Hearing Officer. Enclosed with that Order will be the information for the appeal process.

Penalty Structure

Penalties are assessed for:

- violations of permit conditions;
- failure to maintain soils in a damp, crusted, or stabilized condition, or to clean track-out from paved roads; and
- fugitive dust emissions.
- non-compliance with a CAO.

Penalties are listed in Section 9 of the Air Quality Regulations.

The maximum penalties can reach \$10,000.00 per day, per offense.

Project Phasing**CONTROL MEASURES**

1. The Dust Control Permit and Dust Mitigation Plan must address all phases and stages of the construction project. For projects with large cut and fill requirements, the land not active after the cut and fill must be stabilized using a palliative or other approved control measure and vehicle access must be prevented. Permittees should also limit the area disturbed at any one time.
2. The construction project may consist of a single phase or be divided into as many phases as the permittee chooses. Each phase must have distinct physical boundaries to make it easily identifiable. Construction project activities are to be further divided, whenever applicable, into the following six stages of project activities: (1) offsite utility and street development; (2) site preparation and earthwork; (3) forms construction and pouring; (4) subgrade preparation and paving; (5) building; and (6) landscaping.
3. When project stages are identified, the following information must be provided for each project stage:
 - a. Stage number and title;
 - b. Amount of acreage included in stage;
 - c. Control Requirements for activity; and
 - d. Best Management Practice Control Measures to be implemented to meet Control Requirements.

4. Project phase planning for dust control is a cost-effective method for reducing potential emissions on a construction site. Project planning may include the following procedures:
- a. Reducing the size of the staging area;
 - b. Disturbing only a portion of the overall site at one time;
 - c. Paving roadways as soon as possible;
 - d. Constructing block walls as soon as possible;
 - e. Planting perimeter vegetation with greater than 50 percent silhouette areas at the beginning of the project;
 - f. Limiting the number of ingress and egress points;
 - g. Paving parking lots as soon as possible;
 - h. For large cut and fill projects, stabilizing the portion of the construction site not being actively worked for the period of time it is vacant; or
 - i. Confine import haul traffic to compacted or paved routes, where possible, to avoid picking up soil and rock in tire treads.

Recording Dust Control Measures**REQUIREMENTS**

- Record Use of Dust Palliatives
- Record verification of compliance with all applicable Dust Control Measures
- Record Trackout Conditions and Cleanup
- Notify DAQ of compliance with CAOs
- Notify DAQ when project is complete
- Retain project records

CONTROL MEASURES

1. Document all use of dust palliatives on the Dust Palliative Information form DCP07 (see Attachment 1: Dust Control Permit Forms).
2. Record Trackout conditions daily and document cleanup measures taken.
3. Record other dust control measures taken, including date, time, and amount of water applied for dust control purposes.
4. Notify DAQ of compliance with any CAOs issued.
5. Notify DAQ upon completion of project.
6. Retain all project records for one year or six months beyond project completion, whichever is greater.

Weather Conditions**REQUIREMENTS**

- **Monitor current weather conditions and weather predictions from National Weather Service**
- **Cease all construction activities if fugitive dust exceeds 20% opacity or visible plume restrictions and cannot be controlled.**

CONTROL MEASURES

1. When winds occur that cause fugitive dust emissions, despite adhering to all Best Management Practices, all construction activities must cease immediately, except water trucks/pulls which should continue to operate.
2. Water trucks/pulls should continue to operate under these circumstances unless wind conditions are such that continued operation of watering equipment cannot reduce fugitive dust emissions or visibility is limited to an extent that it is hazardous to continue operating equipment.

BEST MANAGEMENT PRACTICES FOR DUST CONTROL

Best Management Practices are site-specific dust control measures that are based on each project soil type, specific construction activities, phases and stages. These practices must be included in each Dust Mitigation Plan and are established to meet the goal of reducing particulate emissions from construction sites. Additionally, some practices are designed for the purpose of reducing the amount of water needed for dust control.

1. Soil Type Categories

Soil types are classified into five categories (high, moderately high, moderately low, low, and slight) based on their particulate emission potential (PEP). The fifth category, "slight", is created solely to identify areas of bedrock outcrops. PEP is determined by soil silt content (measured by the soil percentage that will pass through a 200-mesh sieve) and optimum moisture content (measured by the percent of moisture necessary to compact soils).

Figure 1 depicts a "decision flowchart" using these parameters. A graph, which plots measured optimum moisture content vs. silt content for Las Vegas Valley soils, is used to classify PEP and is included as Figure 2. If optimum moisture content or silt content is not known for a specific project location, maps of Clark County and Las Vegas Valley delineating the five soil type categories are provided as Figures 3 and 4, respectively.

Soil type category maps are to be used as a guideline. The actual measured silt content and moisture content for maximum compaction shall take precedence over any mapped soil type categories. Permit holders shall immediately modify their Dust Control Permit if construction site soils are found to be different than mapped categories.

2. Best Management Practices

The following subsections list the current Best Management Practices (BMPs) developed and approved for use in Clark County for dust mitigation for construction activities. The BMPs are organized alphabetically by construction activity.

The Control Requirements of each construction activity category to be conducted on the construction project must be met through implementation of Control Measures. Within most construction activity categories, there are choices of Control Measure(s) to be selected from to meet the Control Requirements. Control Requirements are stated for each construction activity. All Control Measures that will be used to meet the Control Requirements on the construction project must be identified in the Dust Mitigation Plan for each construction activity.

Control Measures are presented by soil type category where applicable. Some Control Measures apply to construction activities regardless of soil type. The Control Measures selected to meet Control Requirements must address the soil type for the area in which the construction project is permitted (see Figures 3 and 4).

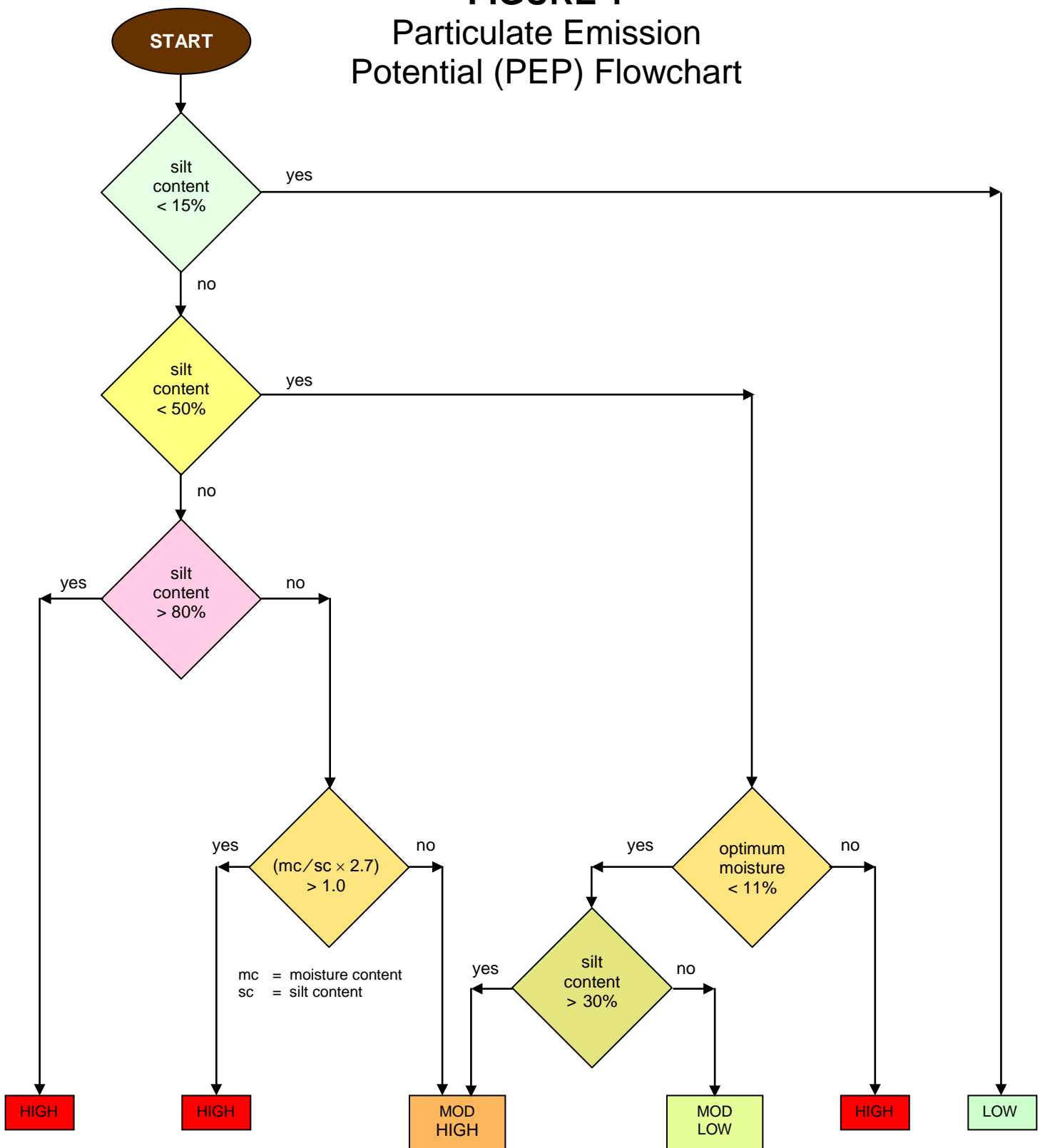
Control Measures not currently listed in the Dust Control Handbook may be proposed in a Dust Mitigation Plan. Such unlisted Control Measures will be reviewed by DAQ staff and may require additional information regarding their effectiveness. Any unlisted Control Measure must clearly meet the Control Requirements for an activity category.

The DAQ will apply the following minimum criteria when evaluating any unlisted Control Measures that are proposed to meet the Control Requirements for a BMP:

1. The Control Measure technique is a new or alternative technology that is demonstrated to be equally or more effective in meeting the Control Requirement than the existing Control Measures; or
2. Site logistics do not practically allow for implementation of a listed Control Measure as written (e.g. road width or pre-existing barriers limit the size or width of a gravel pad); or
3. The owner/operator demonstrates that a listed Control Measure is technically infeasible due to site-specific or material-specific conditions, such that implementation of the Control Measure will not provide a benefit in reducing fugitive dust (e.g. pre-soaking screened, washed rock when handling).

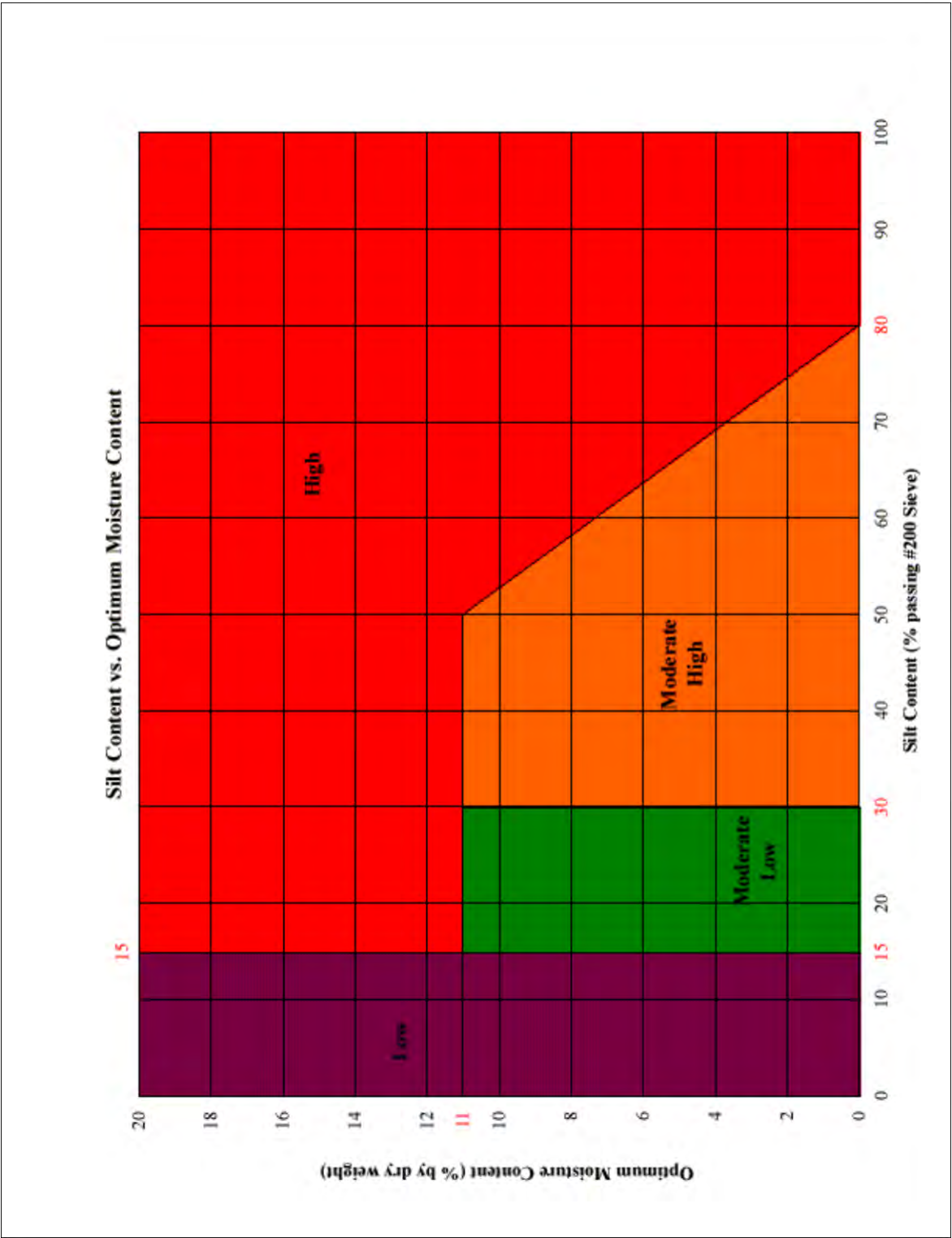
Permit deviations from specific soil type BMPs in the form of a “downgrade” to the BMPs listed for a soil type with a lower PEP, or applying a Control Measure listed for all soil types in lieu of a specific soil type BMP, are not approvable unless demonstrated to meet at least one of the above criteria.

FIGURE 1
Particulate Emission
Potential (PEP) Flowchart



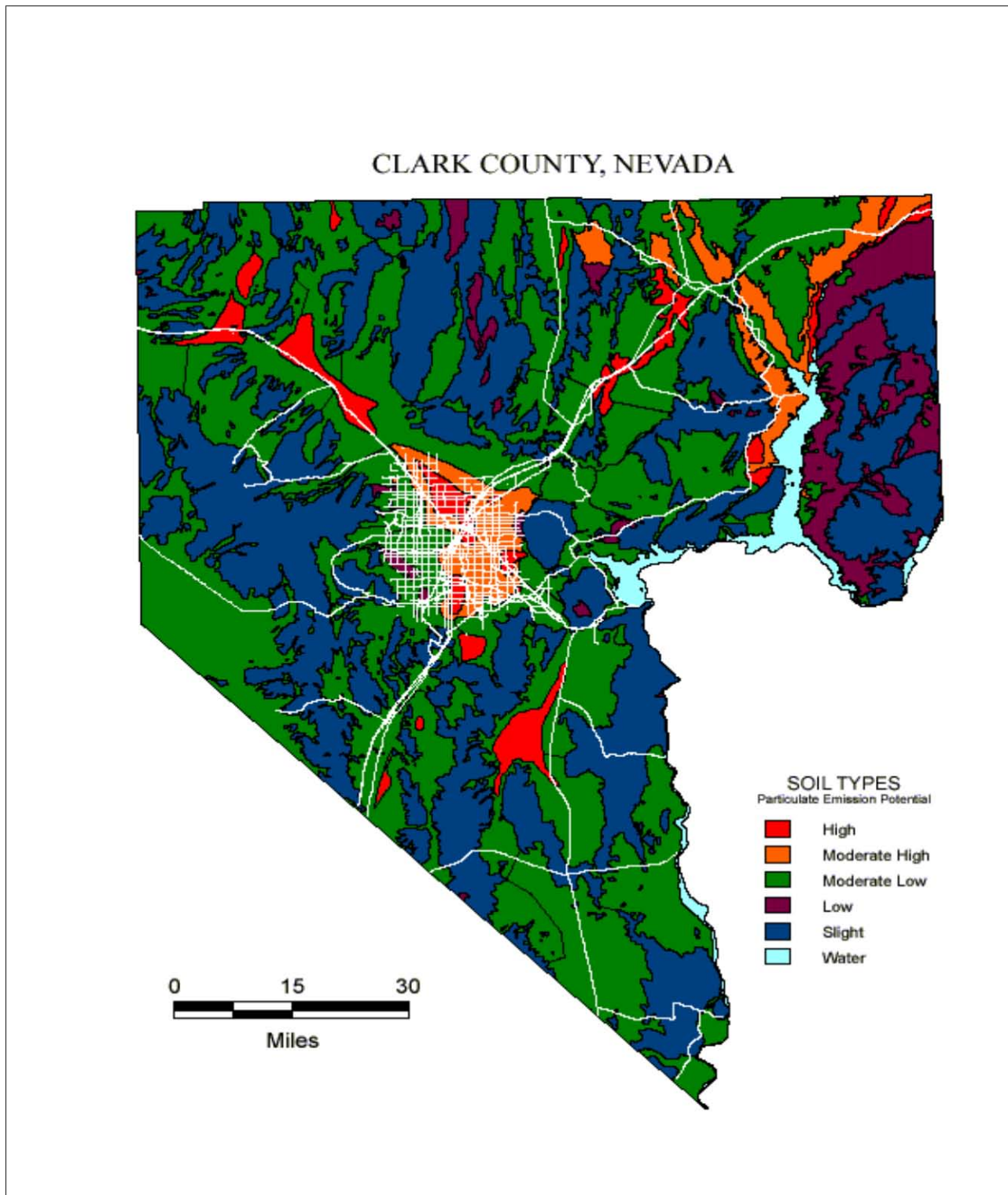
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FIGURE 2
Silt Content vs. Optimum Moisture Content



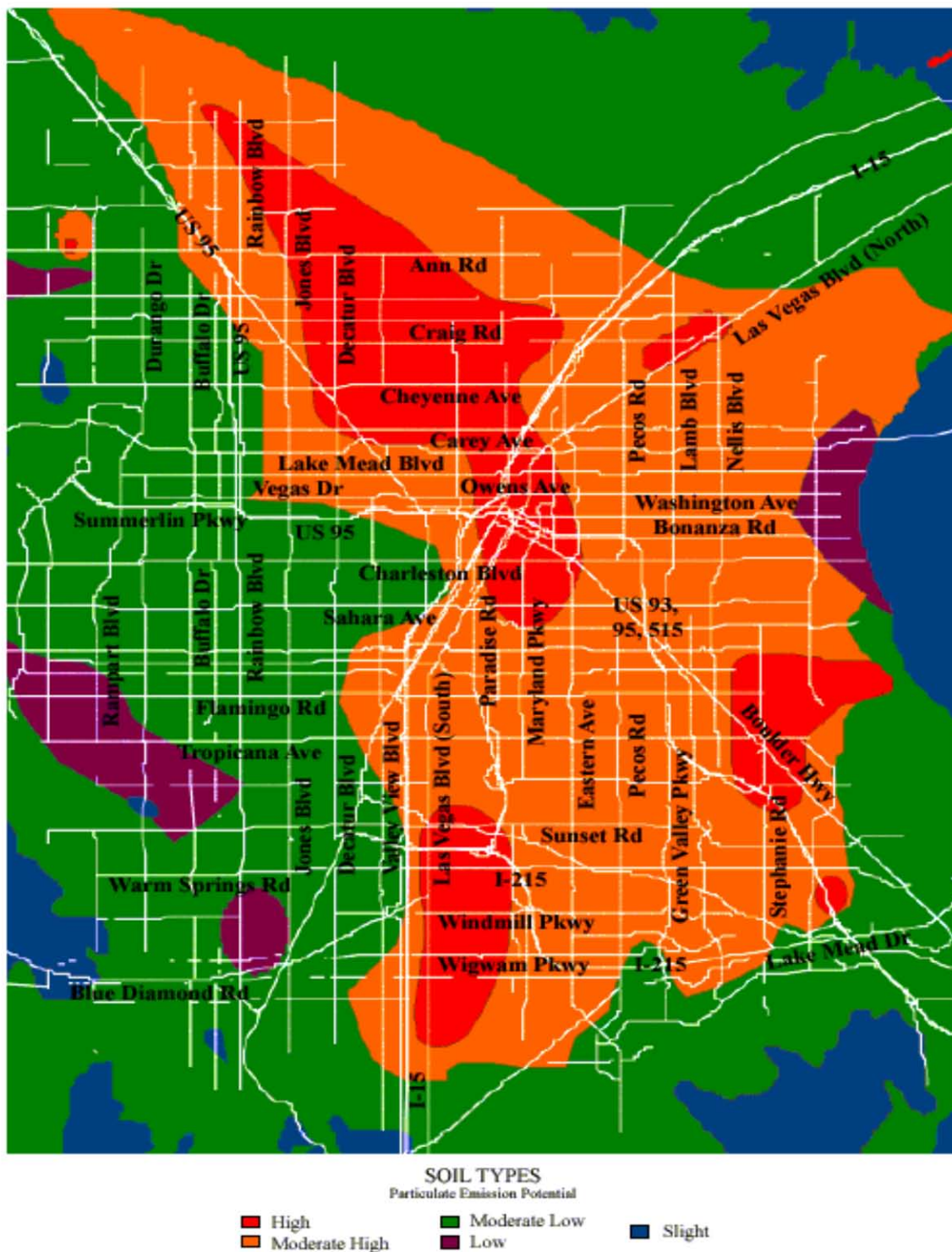
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FIGURE 3: COUNTY SOIL TYPES MAP



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FIGURE 4: VALLEY SOIL TYPES MAP
Las Vegas Valley



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BACKFILLING

BMP 01

Definition: Filling area previously excavated or trenched.

Requirement: Stabilize backfill material when not actively handling.

- 01-1 Water backfill material to maintain moisture or to form crust when not actively handling.
- 01-2 Apply and maintain a dust palliative to backfill material to form crust when not actively handling.
- 01-3 Cover or enclose backfill material when not actively handling.

Requirement: Stabilize backfill material during handling.

- 01-4 Empty loader bucket slowly and minimize drop height from loader bucket.
- 01-5 Dedicate water truck or large hose to backfilling equipment and apply water as needed.

Note: Select at least one of the above; in addition the appropriate control measure for your soil type must be selected from the following.

- 01-6 **L:** Mix moist soil with dry soil until the optimum moisture is reached.
- 01-7 **ML:** Apply and mix water into the backfill material until optimum moisture is reached.
- 01-8 **MH:** Apply and mix water and tackifier solution into the backfill material until optimum moisture is reached.
- 01-9 **H:** Apply and mix water and surfactant solution into the backfill material until optimum moisture is reached.

Requirement: Stabilize soil at completion of backfilling activity.

- 01-10 Apply water and maintain disturbed soils in a stable condition until permanent stabilization is complete.
- 01-11 Apply and maintain a dust palliative on disturbed soils to form a crust following backfilling activity.

Requirement: Stabilize material while using pipe padder equipment.

- 01-12 Mix moist soil with dry soil until the optimum moisture is reached.
- 01-13 Dedicate water truck or large hose to equipment and apply water as needed.

Definition: Sandblasting and/or abrasive blasting.

Requirement: Stabilize surface soils where support equipment and vehicles will operate.

- 02-1 Pre-water and maintain surface soils in a stabilized condition where support equipment and vehicles will operate.
- 02-2 Apply and maintain a dust palliative on surface soils where support equipment and vehicles will operate.

Requirement: Limit visible emissions to no more than an average of 40% opacity for any period aggregating 3 minutes in any 60-minute period pursuant to Air Quality Regulations.

- 02-3 Hydro-blasting, using water as the propellant, must be conducted in a manner to maintain visible emissions within opacity standards.
- 02-4 Dry, unconfined blasting with abrasive material must use only those abrasives that are approved and certified by the California Air Resources Board (CARB) for such use (see Attachment 3: CARB-Approved Abrasives Information).

Requirement: Stabilize particulate matter in surrounding area following blasting.

- 02-5 Clean particulate material from surrounding area and water disturbed soils following blasting.
- 02-6 Apply and maintain a dust palliative to surrounding area following blasting.

Recommendation: Abrasive blasting should be conducted within an enclosed structure whenever possible to preclude the release of visible emissions to the atmosphere.

Definition: Explosive blasting of soil and rock.

Requirement: A Blasting Supplemental form must be filled out, submitted and approved by the DAQ prior to any blasting (see Appendix A: Dust Control Permit Supplemental Forms)

Requirement: No blasting within 1,500 feet of a residential area, occupied building or major roadway, when wind direction is toward these structures.

Requirement: Blasting shall be between the hours of 8:00 a.m. and 4:30 p.m., excluding Saturdays, Sundays and holidays unless prior permission is obtained from the Control Officer.

Requirement: No blasting allowed when the National Weather Service forecasts wind gusts above 25 miles per hour (mph).

- 03-1 Prior to setting explosive charges in holes, document current and predicted weather conditions as provided by the National Weather Service. If the current forecast is for wind gusts of 25 mph or greater or they are forecasted to be 25 mph or greater within the next 24 hours, do not charge any blast holes. When setting explosive charges, monitor weather reports for wind gusts of 25 mph or greater on the National Weather Service Radio and/or Internet sites. If wind gusts above 25 mph are stated, discontinue charging additional blast holes. Limit the blast to holes charged at time the wind report is made.

Requirement: Stabilize surface soils where drills, support equipment and vehicles will operate.

- 03-2 Pre-water and maintain surface soils in a stabilized condition where drills, support equipment and vehicles will operate.
- 03-3 Apply and maintain a dust palliative on surface soils where drills, support equipment and vehicles will operate.

(Continued on next page.)

Requirement: Stabilize soil during blast preparation activities.

- 03-4 Limit the blast footprint area to no larger than what can be practically stabilized immediately following the blast.
- 03-5 Maintain surface rock and vegetation where possible to reduce exposure of disturbed soil to wind.

Note: Select at least one of the above; in addition the appropriate control measure for your soil type must be selected from the following.

- 03-6 **L & ML:** Presoak surface soils to depth of the caliche or bedrock with water using water trucks, water pulls, sprinklers or wobblers.
- 03-7 **MH:** Presoak surface soils to depth of the caliche or bedrock with water and tackifier mixture using water trucks, water pulls, sprinklers or wobblers.
- 03-8 **H:** Presoak surface soils to depth of the caliche or bedrock with water and surfactant mixture using water trucks, water pulls, sprinklers or wobblers.

Requirement: Stabilize soil after blasting.

- 03-9 Water disturbed soils to form crust immediately following blast and safety clearance.
- 03-10 Apply and maintain a dust palliative to form crust immediately following blast and safety clearance.

See also: BMP 11: DISTURBED LAND – Long-Term Stabilization, if no continuing activity will occur within 30 days.

CLEARING AND GRUBBING

BMP 04

Definition: Clearing and grubbing for site preparation and vacant land cleanup.

Requirement: Stabilize surface soils where support equipment and vehicles will operate.

- 04-1 Pre-water and maintain surface soils in a stabilized condition where support equipment and vehicles will operate.
- 04-2 Apply and maintain a dust palliative on surface soils where support equipment and vehicles will operate.

Requirement: Stabilize soil during clearing and grubbing activities.

- 04-3 **L & ML:** Apply water during clearing and grubbing activities.
- 04-4 **MH:** Apply water and tackifier mixture during clearing and grubbing activities.
- 04-5 **H:** Apply water and surfactant mixture during clearing and grubbing activities.

Requirement: Stabilize disturbed soil immediately after clearing and grubbing activities.

- 04-6 Water disturbed soils to form crust immediately following clearing and grubbing activities.
- 04-7 Apply and maintain a dust palliative on disturbed soils to form crust immediately following clearing and grubbing activities.

Recommendations: Maintain live perennial vegetation and desert pavement where possible.

See also: BMP 11: DISTURBED LAND – Long-Term Stabilization, if no continuing activity will occur within 30 days.

Definition: Clearing and cleaning of forms, foundations and slabs.

Requirement: Limit visible emissions to no more than an average of 20% opacity for any period aggregating 3 minutes in any 60-minute period pursuant to Air Quality Regulations.

- 05-1 Use single stage pours, unless prohibited by engineering design or building code, to minimize clearing.

Note: At least one of the following must be selected.

- 05-2 Use water spray to clear forms, foundations and slabs.
- 05-3 Use sweeping and water spray to clear forms, foundations and slabs.
- 05-4 Use industrial vacuum to clear forms, foundations and slabs prior to the use of high pressure air to blow soil and debris.
- 05-5 Use industrial vacuum to clear forms, foundations and slabs.

Recommendations: Verify Building Code Restrictions for use of water on slabs.

Avoid use of high pressure air to blow soil and debris from forms, foundations and slabs.

CRUSHING

BMP 06

Definition: Crushing of construction and demolition debris, rock and soil.

Requirement: Obtain the appropriate Operating Permit for powered crushers prior to engaging in crushing activity. Comply with permit conditions.

Requirement: Stabilize surface soils where support equipment and vehicles will operate.

- 06-1 Pre-water and maintain surface soils in a stabilized condition where support equipment and vehicles will operate.
- 06-2 Apply and maintain a dust palliative to surface soils where support equipment and vehicles will operate.

Requirement: Stabilize material before crushing.

- 06-3 Pre-water material prior to loading into crusher.
- 06-4 Test material to determine moisture content and silt loading, crush only material that is at optimum moisture content.

Requirement: Stabilize material during crushing.

- 06-5 Apply water to stabilize material so as to remain in compliance with opacity standards and permit conditions, during crushing.
- 06-6 Monitor emissions opacity. Make adjustments to remain in compliance with opacity standards and permit conditions.

Requirement: Stabilize material after crushing.

- 06-7 Water crushed material to form crust immediately following crushing.
- 06-8 Apply and maintain a dust palliative to crushed material.

See also: BMP 19. STOCKPILING

CUT AND FILL

BMP 07

Definition: Cut and/or fill soils for site grade preparation.

Requirement: Stabilize surface soils where support equipment and vehicles will operate.

- 07-1 Pre-water and maintain surface soils in a stabilized condition where support equipment and vehicles will operate.
- 07-2 Apply and maintain a dust palliative to surface soils where support equipment and vehicles will operate.

Requirement: Pre-water soils.

- 07-3 Dig a test hole to depth of cut or equipment penetration to determine if soils are moist at depth. Continue to pre-water if not moist to depth of cut.
- 07-4 **L & ML:** Pre-water with sprinklers or wobblers to allow time for penetration.
- 07-5 **L & ML:** Pre-water with water trucks or water pulls to allow time for penetration.
- 07-6 **MH:** Pre-water with a water and tackifier mixture using sprinklers or wobblers to allow time for penetration.
- 07-7 **MH:** Pre-water with a water and tackifier mixture using water trucks or water pulls to allow time for penetration.
- 07-8 **H:** Pre-water with a water and surfactant mixture using sprinklers or wobblers to allow time for penetration.
- 07-9 **H:** Pre-water with a water and surfactant mixture using water trucks or water pulls to allow time for penetration.

Requirement: Stabilize soil during cut activities.

- 07-10 Apply water, using water truck or water pull, to depth of cut prior to subsequent cuts.
- 07-11 No cut activities fill only.

Requirement: Stabilize soil after cut and fill activities.

- 07-12 Water disturbed soils to form crust following fill and compaction.
- 07-13 Apply and maintain a dust palliative on disturbed soils to form crust following fill and compaction.

See also: BMP 11: DISTURBED LAND – Long-Term Stabilization if no continuing activity will occur within 30 days.

DEMOLITION – Implosion

BMP 08

Definition: Implosive blasting demolition of structure.

Requirement: A Demolition Supplemental form (see Appendix A) and a Supplement To The Dust Mitigation Plan (see Appendix B) must be filled out, submitted and approved by the Control Officer prior to implosion.

Requirement: An asbestos survey must be conducted on any facility before demolition can commence.

Requirement: A complete Clark County NESHAP Notification form must be submitted to the DAQ at least ten working days prior to demolition. The asbestos survey must be attached to this notification.

Requirement: All friable and non-friable asbestos containing material must be removed from the facility prior to implosion.

Requirement: Confine blasting to times when wind direction is away from closest residential areas, occupied buildings and major roadways.

Requirement: Implosion time must be pre-approved by the Control Officer.

Requirement: Monitor and document current weather conditions and weather predictions from National Weather Service.

- 08-1 Prior to setting explosive charges, obtain and document current and predicted weather conditions as provided by the National Weather Service. If wind advisory (over 20 miles per hour gusts or average wind speed of 10 miles per hour) is current or forecasted for blast period, do not set charges and do not blast. Maintain a calibrated anemometer and log ambient air velocity and direction within 1,000 feet of the implosion site, beginning at least 1 (one) hour prior to and 15 minutes after the implosion.

(Continued on next page)

Requirement: Stabilize surface area where support equipment and vehicles will be operated.

08-2 Restrict support equipment and vehicles to existing paved and/or stable areas.

Note: You must select one of the following if paved and/or stable areas do not already exist and you have not selected 08-2.

08-3 Pre-water and maintain surface soils in a stabilized condition where support equipment and vehicles will operate.

08-4 Apply and maintain a dust palliative on surface soils where support equipment and vehicles will be operated.

Requirement: Stabilize demolition debris immediately following blast and safety clearance.

08-5 Apply water to debris immediately following blast and safety clearance.

08-6 Apply and maintain a dust palliative to debris immediately following blast and safety clearance.

Requirement: Stabilize and clean surrounding area immediately following blast and safety clearance.

08-7 Water all disturbed soil surfaces to establish crust and prevent wind erosion of soil.

08-8 Thoroughly clean blast debris from paved and other surfaces following blast and safety clearance.

See also: BMP 23: TRUCK LOADING.

Definition: Mechanical and manual demolition of walls, stucco, concrete, freestanding structures, buildings, load-bearing walls and removal of transite pipe

Requirement: For renovation or demolition of a structure, a Demolition Supplemental form (see Appendix A) must be filled out, submitted and approved by the Control Officer prior to commencing demolition.

Requirement: An asbestos survey must be conducted on any facility or structure that is subject to NESHAP requirements before demolition can commence.

Requirement: A complete Clark County NESHAP Notification form must be submitted to the DAQ at least ten working days prior to demolition. The asbestos survey must be attached to this notification.

Requirement: Stabilize surface soils where support equipment and vehicles will operate.

- 09-1 Pre-water and maintain surface soils in a stabilized condition where support equipment and vehicles will operate.
- 09-2 Apply and maintain a dust palliative to surface soils where support equipment and vehicles will operate.
- 09-3 Area where support equipment and vehicles will operate is completely covered with paving or concrete.

Requirement: Stabilize demolition debris during handling.

- 09-4 Apply water to demolition debris during handling.

Requirement: Stabilize debris following demolition.

- 09-5 Apply water to stabilize demolition debris.
- 09-6 Apply a dust palliative to stabilize demolition debris.

Requirement: Stabilize surrounding area following demolition.

- 09-7 Apply water to stabilize surrounding area following demolition.
- 09-8 Apply and maintain a dust palliative to stabilize surrounding area following demolition.

See also: BMP 23: TRUCK LOADING.

DISTURBED SOIL

BMP 10

Definition: Disturbed soil throughout project including between structures.

Requirement: For each non-linear project to be permitted for 5 acres or less; install perimeter wind barrier 3 feet or more in height made of material with a porosity of 50% or less.

Requirement: Limit vehicle traffic and disturbance of soils where possible.

- 10-1 Limit vehicle traffic and disturbance of soils with the use of fencing, barriers, barricades, and/or wind barriers.

Requirement: Stabilize and maintain stability of all disturbed soil throughout construction site.

Note: You must choose one or more of the following.

- 10-2 Apply water to stabilize disturbed soils. Soils must be kept in a sufficiently damp, crusted or covered condition.
- 10-3 Apply and maintain a dust palliative based on soil type and future plans.

Requirement: Soil conditions, including preventive and corrective measures, must be recorded every day the construction project is active.

- 10-4 Record soil conditions and dust control actions in daily project records.

Recommendations: If interior block walls are planned, install as early in the construction as possible.

See also: BMP 11: DISTURBED LAND – Long-Term Stabilization, if no continuing activity will occur within 30 days.

DISTURBED LAND – Long-Term Stabilization

BMP 11

Definition: Large tracts of disturbed land that will not have continuing activity for more than 30 days.

Requirement: Stabilize soil to meet standards required by Air Quality Regulation Section 90.

- 11-1 Apply and maintain a dust palliative on disturbed soils for long-term stabilization.
- 11-2 Stabilize disturbed soil with vegetation for long-term stabilization.
- 11-3 Pave or apply surface rock for long-term stabilization.
- 11-4 Use wind breaks in accordance with a site-specific plan approved by the Control Officer and Region IX Administrator of the EPA.
- 11-5 Apply water and maintain soils in a visible damp or crusted condition for temporary stabilization.

Requirement: Prevent access to limit soil disturbance.

- 11-6 Prevent access by fencing, ditches, vegetation, berms or other suitable barrier or means approved by the Control Officer.

Recommendations: Plant perimeter vegetation early. Use of native and drought-tolerant plants with greater than 50 % silhouette area is encouraged.

See also: BMP 12: DUST SUPPRESSANT, DUST PALLIATIVE AND SURFACTANT – Selection and Use.

DUST PALLIATIVE – Selection and Use

BMP 12

Definition: Selection and use of chemical and organic dust suppressing agents and other dust palliatives.

Requirement: Follow AQD “Interim Policy on Dust Palliatives Use In Clark County, Nevada”.

Requirement: Record use of suppressants and dust palliatives and retain records.

Requirement: Follow applicable federal and state regulations.

Requirement: Select method of long-term stabilization taking into consideration future land use.

- 12-1 For traffic area applications use Table 1: Traffic Area Application Requirements, Appropriate Use of Liquid Dust Palliatives and Application Rates, from the Interim Policy on Dust Palliatives Use In Clark County, Nevada.
- 12-2 For non-traffic area applications use Table 2: Non-Traffic Area Application Requirements, Appropriate Use of Liquid Dust Palliatives and Application Rates, from the Interim Policy on Dust Palliatives Use In Clark County, Nevada.

IMPORTING/EXPORTING SOIL, ROCK AND OTHER BULK MATERIAL

BMP 13

Definition: Importing or exporting of soil, aggregate, decorative rock, debris, Type II and other bulk material.

Requirement: Limit visible dust opacity from vehicular operations.

- 13-1 Apply water and limit vehicle speeds to 15 mph on the work site.
- 13-2 Apply and maintain dust suppressant on haul routes.

Requirement: Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage.

Requirement: Maintain 3-6 inches of freeboard to minimize spillage.

Requirement: Stabilize materials during transport on site.

- 13-3 Use tarps or other suitable enclosures on haul trucks.
- 13-4 Stabilize materials with water.

Requirement: Clean wheels and undercarriage of haul trucks prior to leaving construction site.

Recommendations: Verify State and local laws, concerning the hauling of bulk materials on public roadways.

See also: BMP 20: TRACKOUT PREVENTION AND CLEANUP.

BMP 23: TRUCK LOADING.

LANDSCAPING

BMP 14

Definition: Installation of sod, decorative rock, desert or other landscape material.

Requirement: Stabilize soils, materials and slopes during handling.

- 14-1 **L & ML:** Apply water prior to leveling or any other earth moving activity to keep the soil moist throughout the process.
- 14-2 **MH:** Apply a water and tackifier mixture prior to leveling or any other earth moving activity to keep the soil moist throughout the process.
- 14-3 **H:** Apply a water and surfactant mixture prior to leveling or any other earth moving activity to keep the soil moist throughout the process.

Requirement: Stabilize soils, materials and slopes at completion of activity.

- 14-4 Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slope.
- 14-5 Apply water and maintain sloping surfaces in a crusted condition.
- 14-6 Maintain effective cover over materials.

Definition: Subgrade preparation for paving streets, parking lots, etc.

Requirement: Stabilize soils prior to activities.

- 15-1 Pre-water subgrade surface until optimum moisture content is reached and maintained.

Requirement: Stabilize soils during activities.

- 15-2 Maintain at least 70% of optimum moisture content for Type II material while aggregate is being applied.

Requirement: Stabilize soils following activities.

- 15-3 Place tack coat on Type II aggregate base immediately after it is applied.
- 15-4 Apply water to Type II aggregate base immediately after it is applied.

Requirement: Stabilize adjacent disturbed soils following paving activities.

- 15-5 Stabilize adjacent disturbed soils following paving activities by crusting with water.
- 15-6 Stabilize adjacent disturbed soils following paving activities by applying a dust palliative.
- 15-7 Stabilize adjacent disturbed soils following paving activities with immediate landscaping activity or installation of vegetative or rock cover.
- 15-8 There are no soils adjacent to paving activities.

SAWING/CUTTING MATERIALS

BMP 16

Definition: Sawing or cutting materials such as concrete, asphalt, block or pipe.

Requirement: Limit visible emissions to no more than an average of 20% opacity, pursuant to Air Quality Regulations.

- 16-1 Use water to control dust when cutting materials.
- 16-2 Use a vacuum to collect dust when cutting materials.

SCREENING

BMP 17

Definition: Screening of rock, soil or construction debris.

Requirement: If using a powered screen, obtain the appropriate Operating Permit for powered screens prior to engaging in screening activity. Comply with permit conditions.

Requirement: Drop material through the screen slowly and minimize drop height.

Requirement: Stabilize surface soils where support equipment and vehicles will operate.

- 17-1 Pre-water and maintain surface soils in a stabilized condition where support equipment and vehicles will operate.
- 17-2 Apply and maintain a dust palliative on surface soils where support equipment and vehicles will operate.

Requirement: Pre-treat material prior to screening.

- 17-3 Apply sufficient water to obtain at least 70% optimum moisture in material prior to screening.
- 17-4 Apply a dust suppressant to material prior to screening.

Requirement: Stabilize material during screening.

- 17-5 Dedicate water truck or large hose to screening operation and apply water as needed to prevent dust.
- 17-6 Apply water to material as it is being dropped through the screen.
- 17-7 Install wind barrier upwind of screen as high as the screen drop point and made of material with a porosity of 50% or less.

Requirement: Stabilize material and surrounding area immediately after screening.

- 17-8 Apply water to stabilize screened material and surrounding area after screening.
- 17-9 Apply and maintain a dust palliative to stabilize screened material and surrounding area after screening.

See also: BMP 19: STOCKPILING

STAGING AREAS

BMP 18

Definition: Staging areas, equipment storage and material storage areas.

Requirement: Limit visible dust opacity from vehicular operations.

- 18-1 Limit vehicle speeds to 15 mph in the staging area and on all unpaved access routes.
- 18-2 Apply and maintain dust suppressant on all vehicle traffic areas in the staging areas and unpaved access routes.

Requirement: Stabilize staging area soils during use.

- 18-3 Pre-water and maintain surface soils in a stabilized condition where support equipment and vehicles will operate.
- 18-4 Apply and maintain a dust palliative to surface soils where support equipment and vehicles will be operated.

Requirement: Stabilize staging area soils at project completion.

- 18-5 Apply a dust palliative.
- 18-6 Apply screened or washed Type II aggregate.
- 18-7 Use wind breaks in accordance with a site-specific plan approved by the Control Officer and Region IX Administrator of the EPA.
- 18-8 Pave with thin paving.
- 18-9 Completed project will cover staging area with buildings, paving, and/or landscaping.
- 18-10 Apply water to form adequate crust and prevent access.

Recommendations: Limit size of staging areas.

Limit ingress and egress points.

See also: BMP 20: TRACKOUT PREVENTION AND CLEANUP

STOCKPILING

BMP 19

Definition: Stockpiling of materials, such as Type II, rock or debris, for future use or export.

Requirement: To the extent possible, maintain stockpile to avoid steep sides or faces.

Requirement: Stockpile location and height must be maintained pursuant to Air Quality Regulations. Stockpiles located within 100 yards of occupied buildings must not be constructed over 8 feet in height.

- 19-1 Stockpiles will not be constructed over 8 feet in height.
- 19-2 Stockpiles will be constructed over 8 feet high and must have a road bladed to the top to allow water truck access or must have a sprinkler irrigation system installed, used and maintained

Requirement: Stabilize surface soils where support equipment and vehicles will operate.

- 19-3 Pre-water and maintain surface soils in a stabilized condition where support equipment and vehicles will operate.
- 19-4 Apply and maintain a dust palliative on surface soils where support equipment and vehicles will operate.

Requirement: Stabilize stockpile materials during handling.

- 19-5 Maintain stockpile materials with at least 70% optimum moisture content.
- 19-6 Remove material from the downwind side of the stockpile, when safe to do so.

Note: Select at least one of the above; in addition the appropriate control measure for your soil type must be selected from the following.

- 19-7 **L & ML:** Apply water during stacking, loading and unloading operations.
- 19-8 **MH:** Apply a water and tackifier mixture during stacking, loading and unloading operations.
- 19-9 **H:** Apply a water and surfactant mixture during stacking, loading and unloading operations.

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Requirement: Stabilize stockpiles at completion of activity.

- 19-10 Water stockpiles to form a crust immediately at the completion of activity.
- 19-11 Apply and maintain a dust palliative to all outer surfaces of the stockpiles.
- 19-12 Provide and maintain wind barriers on 3 sides of the pile, whose length is no less than equal to the length of the pile, whose distance from the pile is no more than twice the height of the pile, whose height is equal to the pile height, and made of material with a porosity of 50% or less.
- 19-13 Apply a cover or screen to stockpiles.

TRACKOUT PREVENTION AND CLEANUP

BMP 20

Definition: Prevention and cleanup of mud, silt and soil tracked out onto paved roads.

Requirement: In soils that have a PEP classification of “High”, pave construction activities roadways as early as possible.

Requirement: Use of soil to create a ramp for vehicle access over a curb is prohibited.

Requirement: Trackout conditions, including preventive and corrective measures, must be recorded daily for every day that the construction project access is used by vehicles.

20-1 Record soil conditions and dust control actions in daily project records.

Requirement: Prevent dust from trackout.

20-2 Immediately clean trackout from paved surfaces to maintain dust control. Trackout must not extend 50 feet or more.

20-3 Maintain dust control during working hours and clean trackout from paved surfaces at the end of the work shift/day. Trackout must not extend 50 feet or more and must be cleaned daily, at minimum.

Requirement: Install and maintain trackout control devices in effective condition at all access points where paved and unpaved access or travel routes intersect.

20-4 Install gravel pad(s) consisting of 1” to 3” rough diameter, clean, well-graded gravel or crushed rock. Minimum dimensions must be 30 feet wide by 3 inches deep, and, at minimum, 50’ or the length of the longest haul truck, whichever is greater. Re-screen, wash or apply additional rock in gravel pad to maintain effectiveness.

20-5 Install wheel shakers. Clean wheel shakers on a regular basis to maintain effectiveness.

20-6 Install wheel washers. Maintain wheel washers on a regular basis to maintain effectiveness.

20-7 Install wheel shakers in the event that trackout cannot be controlled with gravel pads.

20-8 Install wheel washer in the event that trackout cannot be controlled with gravel pads and wheel shakers.

20-9 Motorized vehicles will only operate on paved surfaces.

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Requirement: All exiting traffic must be routed over selected trackout control device(s).

- 20-10 Clearly establish and enforce traffic patterns to route traffic over selected trackout control device(s).
- 20-11 Limit site accessibility to routes with trackout control devices in place by installing effective barriers on unprotected routes.

Definition: Construction related traffic on unpaved interior and/or access roads and unpaved employee/worker parking areas.

Requirement: Limit visible dust opacity from vehicular operations.

- 21-1 Limit vehicle speeds to 15 mph on all unpaved routes and parking areas.
- 21-2 Apply and maintain dust palliative on all vehicle travel areas.

Requirement: Stabilize all haul routes.

- 21-3 Apply water to haul routes and maintain in a stabilized condition.
- 21-4 Apply a dust palliative to haul routes and maintain in a stabilized condition.
- 21-5 Apply gravel to haul routes and maintain in a stabilized condition.
- 21-6 Supplement dust palliative or aggregate applications with watering, if necessary.

Requirement: Stabilize all off-road and parking areas.

- 21-7 Apply water to off-road traffic and parking areas and maintain in a stabilized condition.
- 21-8 Apply gravel to off-road traffic and parking areas and maintain in a stabilized condition.
- 21-9 Apply recycled asphalt (or other suitable material) to off-road traffic and parking areas and maintain in a stabilized condition.
- 21-10 Apply and maintain a dust palliative (designed for vehicle traffic) to off-road traffic and parking areas and maintain in a stabilized condition.

Recommendations: Use of bumps or dips for speed control is encouraged.

Apply paving as soon as possible to all future roadway areas for PEP categories other than "High".

TRENCHING

BMP 22

Definition: Trenching with track or wheel mounted excavator, shovel, backhoe or trencher.

Requirement: Stabilize surface soils where trenching equipment, support equipment and vehicles will operate.

- 22-1 Pre-water and maintain surface soils in a stabilized condition where trenching equipment, support equipment and vehicles will operate.
- 22-2 Apply and maintain a dust palliative to surface soils where trenching equipment, support equipment and vehicles will operate.

Requirement: Presoak soils prior to trenching activities.

- 22-3 Pre-water surface, pre-trench to 18" depth, soak soils via pre-trench prior to deep trenching.
- 22-4 **L & ML:** Presoak soil with water using sprinklers or wobblers.
- 22-5 **L & ML:** Presoak with water, using water truck and/or water pull.
- 22-6 **MH:** Presoak soil with a water and tackifier mixture using water pulls and/or water trucks.
- 22-7 **MH:** Presoak soil with a water and tackifier mixture using sprinklers or wobblers.
- 22-8 **H:** Presoak soil with a water and surfactant mixture using water pulls and/or water trucks.
- 22-9 **H:** Presoak soil with a water and surfactant mixture using sprinklers or wobblers.

Requirement: Stabilize soil during trenching activities.

- 22-10 **L & ML:** Complete trenching with a dedicated water truck or large hose maintaining water as needed to prevent dust.
- 22-11 **L & ML:** Use spray nozzles mounted on trenching machine.
- 22-12 **MH:** Complete trenching with a dedicated water truck or large hose maintaining a water and tackifier mixture as needed to prevent dust.
- 22-13 **H:** Complete trenching with a dedicated water truck or large hose maintaining a water and surfactant mixture as needed to prevent dust.

(Continued on next page)

Requirement: Stabilize soils at the completion of trenching activities.

- 22-14 Use water to form crust on excavated soil windrow as it is formed.
- 22-15 Use dust palliative to form crust on excavated soil windrow as it is formed.

Recommendations: Wash mud and soil from equipment at completion of trench to prevent crusting and drying of soil on equipment.

See also: BMP 01: BACKFILLING, if applicable.

TRUCK LOADING

BMP 23

Definition: Loading trucks with materials including construction and demolition debris, rock and soil.

Requirement: Ensure all loads are covered prior to leaving the construction site and traveling on public roadways.

Requirement: Stabilize surface soils where loaders, support equipment and vehicles will operate.

- 23-1 Pre-water and maintain surface soils in a stabilized condition where loaders, support equipment and vehicles will operate.
- 23-2 Apply and maintain a dust palliative on surface soils where loaders, support equipment and vehicles will operate.

Requirement: Stabilize material during loading.

- 23-3 Empty loader bucket slowly and keep loader bucket close to the truck to minimize the drop height while dumping.

Note: You must selected 23-3 if PEP is greater than LOW, in addition one of the following must be selected.

- 23-4 **L & ML:** Mix material with water prior to loading.
- 23-5 **L & ML:** Spray material with water while loading.
- 23-6 **MH:** Mix material with a water and tackifier mixture prior to loading.
- 23-7 **MH:** Spray material with a water and tackifier mixture while loading.
- 23-8 **H:** Mix material with a water and surfactant mixture prior to loading.
- 23-9 **H:** Spray material with a water and surfactant mixture while loading.

APPENDIX A

DUST CONTROL PERMIT SUPPLEMENTAL FORMS

1. Blasting Supplemental
2. Demolition Supplemental
3. Record of Daily Dust Control



**CLARK COUNTY
DEPARTMENT OF AIR QUALITY**

4701 W. Russell Rd., Suite 200, Las Vegas Nevada 89118-2231
Office (702) 455-5942 • Fax (702) 383-9994

BLASTING SUPPLEMENTAL

Each blasting contractor working under a Dust Control Permit must complete a separate Blasting Supplemental Form and submit applicable fees prescribed in Section 18 of the Air Quality Regulations.

1. PERMIT INFORMATION:

Permit Number: _____

Applicant/Permittee: _____

Project Name: _____

Project Address/Location: _____

2. BLASTING CONTRACTOR INFORMATION:

Blasting Company: _____

Address: _____

Contact Person: _____

Phone #: _____ Cellular #: _____ Fax #: _____

3. BLASTING DETAILS:

Attach selected Control Measures for BMP 03: BLASTING - Soil and Rock.

Monitor and record weather conditions using a suitable source such as the website

<http://www.wrh.noaa.gov/Lasvegas/>, Las Vegas Weather - Local Forecast.

Duration of Blasting: _____ Start Date: _____ Finish Date: _____

Hours during which blasting will occur: _____ a.m. to _____ p.m.
(Hours other than 8:00 a.m. through 4:00 p.m., Monday through Friday, excluding holidays, require Control Officers prior review and approval.)

Description of material to be blasted: _____

Total number of acres to be blasted: _____ acres Depth: _____

Distance: To nearest residence: _____ To commercial facility: _____

Have nearby residents been informed? ☐ Yes ☐ No

4. SUBMITTED BY:

Name: _____ Title: _____

Company Name: _____

Signature: _____ Date: _____



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DEMOLITION SUPPLEMENTAL

NESHAP notifications must be submitted with renovation/demolition applications regardless of age and/or size of the building.

Permit Number: _____
(If known, otherwise to be completed by DAQ)

1. PERMIT INFORMATION:

Applicant/Permittee: _____

Project Name: _____

Project Address/Location: _____

2. DEMOLITION CONTRACTOR:

Company Name: _____ Responsible Person: _____

Address: _____

Phone #: _____ Cellular #: _____ FAX #: _____

3. DEMOLITION INFORMATION:

Describe demolition to take place: _____

Size of building: _____ ft² Date of building construction: _____

Total Number of buildings on site: _____ Number of buildings to be demolished: _____

4. BEFORE A DUST CONTROL PERMIT CAN BE ISSUED ON SITES REQUIRING AN ASBESTOS SURVEY, THE FOLLOWING IS REQUIRED:

A. If Regulated Asbestos Containing Material (RACM) is present, a NESHAP notification must be submitted to DAQ and an Asbestos Waste Certificate must be issued before the asbestos can be removed and disposed.

B. Once the RACM has been abated, submit a final clearance letter from a certified asbestos consultant along with a copy of the license of the individual that cleared the site.

C. Has Asbestos Waste Certificate been received from DAQ?

No: ☐ Yes: ☐, Certificate #: _____

5. SUBMITTED BY:

Name: _____ Title: _____

Company Name: _____

Signature: _____ Date: _____

CLARK COUNTY



DEPARTMENT OF AIR QUALITY

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RECORD OF DAILY DUST CONTROL FOR CONSTRUCTION ACTIVITIES

Permit Number: _____

Applicant/Permittee: _____

Project Name: _____

Record inspections results and corrective actions taken daily at minimum.

Date	Time	Visible Dust	Project Soils Crusted or Damp	Access Roads Crusted or Damp	Trackout Present/Cleaned	Verification of Compliance With Dust Control Measures

Construction Site Dust Control Records are required by Clark County Air Quality Regulations, Section 94. Records must be retained and made available for inspection by the Department of Air Quality & Environmental Management.

APPENDIX B

SUPPLEMENT TO THE **DUST CONTROL PERMIT MITIGATION PLANS**

Instructions for completing a Supplement to a Dust Mitigation Plan
for projects 10 acres and larger.

**CLARK COUNTY
DEPARTMENT OF AIR QUALITY**

4701 W. Russell Rd., Suite 200, Las Vegas Nevada 89118-2231
Office (702) 455-5942 · Fax (702) 383-9994

**INSTRUCTIONS FOR COMPLETING
A SUPPLEMENT TO THE DUST MITIGATION PLAN
FOR PROJECTS 10 ACRES OR LARGER**

1. A supplement to the Dust Mitigation Plan is required to be submitted for the following activities:
 - (a) Soil disturbing construction activities 10 acres or greater in size.
 - (b) Trenching one mile or more.
 - (b) Structural demolition using implosive or explosive blasting.
2. Upon approval by the Control Officer, this supplement to the Dust Mitigation Plan will become part of the Dust Control Permit as an enforceable permit condition. The applicant for the Dust Control Permit must sign this supplement to the Dust Mitigation Plan.
3. For a project 50 acres or greater in size the determination of the Particulate Emission Potential (PEP) must be calculated using an actual soils analysis of the entire project. If the soils analysis for the project identifies two or more soil types, the area of each soil type shall be shown on a map of the project. A copy of the map shall be included in the application for the Dust Control Permit. The soils analysis shall utilize at least one (1) sample taken from the top one (1) foot of soil for each soil type identified. The soils analysis shall use the appropriate ASTM test to determine the silt content and optimum moisture of the sample(s). The application for the Dust Control Permit shall contain the particulate emission potential (PEP) for each soil type identified calculated from the results of the soils analysis and the Silt Content vs. Optimum Moisture Content Chart (figure 2). The choice of Best Management Practices for the Dust Mitigation Plan may be different for each soil type area, if not, the highest PEP identified on the project shall be used.
4. This supplement is required in addition to the Dust Control Permit Application and Dust Mitigation Plan for All Projects. If you are preparing and submitting this supplement it must include all of the following information:
 - (a) Project Description: This section of the supplement must provide a complete description of the project, a development plan, a schedule of activities, and a time frame for project completion. List any contractors and/or subcontractors known. In addition, this section should contain an estimated proposed expenditure for the total project dust control budget. For projects 50 acres or more, the total acreage that will be disturbed during each stage of the project.

- (b) Site Plan: This section must include one or more maps showing the following information:
 - (1) Number, description, and estimated duration of project phases,
 - (2) Location of project construction offices and access routes, and
 - (3) Areas to be treated with dust palliatives, suppressants or stabilizers.
 - (4) If soil samples are taken to determine PEP, location of each sample.
- (c) Additional Explanation of Control Measures: This section shall include a description of fugitive dust control during non-working hours and an explanation of trackout cleaning and maintenance on adjacent paved roadways. The trackout cleaning description should include the method of street cleaning and the frequency with which it will be accomplished.
- (d) Contingency Plan: This section must include a description of the contingency measures to be implemented if a primary control measure fails to adequately control dust emissions. Contingency measures should also be denoted by checking the Contingency Measure box and listing the measure on the Control Measure Identification form (DCP 03). This section must describe the steps that will be taken to verify that a dust control measure is working and, upon discovery of an inadequacy, the steps that will be taken to initiate a contingency measure.
- (e) Soil Stabilization Measures: This section must include a description of the method of soil stabilization along with the type of stabilization product, application rate, and frequency of application for traffic and non-traffic areas. Documentation as to the stabilizer efficiency and reapplication time is necessary. Record keeping and evaluation of environmental impacts of the dust suppressant applied are required to be maintained for the duration of the project. For linear projects state the method of final stabilization and the means of access prevention upon completion of the project, if applicable.
- (f) Employee Dust Control Training and Compliance: This section must include a statement of the authority and training of personnel who will insure the construction site remains in compliance with the Site-Specific Dust Mitigation Plan. This section must list the responsible parties that are in addition to those listed in the Dust Control Permit Application. For projects having 50 or more acres of actively disturbed soil at any time, list the person that will be the designated Dust Control Monitor and complete form DCP 09: Construction Site Dust Control Monitor, found in attachment 1.
- (g) The supplement to the Dust Mitigation Plan must be signed.

ATTACHMENT 1

DUST CONTROL PERMIT FORMS

1. Dust Control Permit Application (form DCP 01)
2. Dust Mitigation Plan Project Activities Checklist (form DCP 02)
3. Control Measure Identification (BMP) (form DCP 03)
4. Supplemental Permits/Approvals Checklist (form DCP 04)
5. Application for Dust Control Permit Modification (form DCP 06)
6. Address / Contact Information Change (form DCP 06A)
7. Dust Control Permit Renewal (form DCP10)
8. Dust Palliative Information (form DCP 07)
9. Certificate of Project Completion (form DCP 08)
10. Construction Site Dust Monitor (form DCP 09)
11. Application for Modification of Dust Control Permit – Transfer of Permit and/or Change of Property Owner (form DCP 11)
12. Soil Analysis for Projects 50 Acres or More (form DCP 12)



CLARK COUNTY • DEPARTMENT OF AIR QUALITY

4701 W. Russell Rd., Suite 200 • 2nd Floor • Las Vegas, NV 89118-2231
(702) 455-5942 • Fax (702) 383-9994

For DAQ Use Only
Invoice Number: _____

APPLICATION DUST CONTROL PERMIT FOR CONSTRUCTION ACTIVITIES

Blank spaces must be completed for the application to be processed. If not applicable, enter N/A.

1. Applicant/Permittee:

☐ Property Owner ☐ Developer ☐ Prime Contractor ☐ Other _____

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____ Ext: _____ Fax: _____

E-mail Address: _____

2. Project:

Name: _____

Address: _____ City: _____

Nearest major cross-streets: _____

Township(s): _____ Range(s): _____ Section(s): _____

Assessor's Parcel number(s) (Attach map): _____

Project Description: _____

Project Acreage: _____ acres (rounded to the nearest 0.1 acre, all land that will be disturbed must be included in project acreage)

Permit fees: If the project acreage listed above contains a fraction, the project acreage will be rounded up to the next whole number for fee purposes. The rounded up acreage (quantity) value will be used to assess the acreage fee for this permitting action.

Submit the total permit fee, with this application. Permit fees are non-refundable.

You must select one of the following three choices.

☐ This project does not require any offsite street or utility development.

☐ This project requires offsite street/utility development that is not included in this application, and will be added at a later date by modification or additional permit.

☐ This application includes offsite street/utility development. (Area must be marked on the accompanying parcel map. Check all that apply)

Utility Lateral ☐ less than 100 ft. ☐ greater than 100 ft. ☐ Half Street ☐ Full Street

☐ Curb / Entrance ☐ Easement Name and Number of Approved Offsite Plan / Permit /
Easement: _____ ☐ Plan Pending ☐ Other

3. Property Owner (if not applicant):

Name: _____

4. Point of Contact for dust control matters and to whom a NOTICE OF VIOLATION should be sent if necessary:

Name: _____ Company: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____ Ext: _____ Fax: _____

Cellular/Pager: _____ After Hours Phone: _____

5. On-site Superintendent/Supervisor/Foreman contact:

Name: _____ Company: _____

On-site phone: _____ Cellular/Pager: _____

DAQ Dust Class Certification/Card #: _____ Expiration date: _____

Have all other on-site supervisory personnel attended the DAQ Dust Class? ☐ Yes ☐ No

If no, all on-site supervisory personnel must attend a DAQ Dust Class within 30 days.

6. By signing this permit application I certify that:

- A. I am authorized, on behalf of the individual or company listed in Section 1, as Applicant/Permittee, to apply for their Dust Control Permit and to commit to all of the terms and conditions of the requested permit.
- B. Construction activities will be limited to lands that the applicant/permittee either owns or is authorized to use for construction activities. The permit issued subsequent to this application is not a substitute for obtaining the property owners permission to use his land. Issuance of a Dust Control Permit is intended only for the purpose of controlling emissions of air pollutants and assuring compliance with Air Quality Regulations. The applicant/permittee agrees to hold harmless, indemnify, and defend Clark County, its employees and assigns from any claims that may arise due to any unauthorized use of land for construction activities.
- C. The permittee accepts responsibility for assuring that all contractors, subcontractors, and all other persons on the construction site covered by this permit, comply with the terms and conditions of the permit, the dust mitigation plan and all applicable Air Quality Regulations.
- D. The applicant/permittee understands that it is a condition of the permit that the permittee agrees to allow the inspection of the site for compliance with the terms and conditions of the permit and Air Quality Regulations at any time during the permittee's hours of operation by a DAQ officer without prior notice or at any time pursuant to the investigation of a complaint or upon direct observation of emission and/or failure to maintain Best Management Practices.
- E. I understand that any material misrepresentation made in this application may invalidate the permit and that Clark County may pursue enforcement action against me. In addition, I understand any willful misrepresentation may result in criminal penalties. I declare under penalty of perjury that the foregoing is true and correct.

Executed on:

DATE

SIGNATURE

PRINTED NAME

TITLE AND COMPANY NAME

Application completed by, if not completed by signatory (Please Print):

Name Phone Number Ext. _____

PAYMENT INFORMATION TO BE COMPLETED BY THE APPLICANT

PAYING BY (Please Print)

☐ CASH

☐ CHECK

CHECK # _____

NAME AND ADDRESS AS IT APPEARS ON CHECK:

Telephone #: _____

☐ CREDIT CARD

LAST FOUR DIGITS OF CREDIT CARD NUMBER: _____

EXACT NAME AS IT APPEARS ON CREDIT CARD:

FOR DAQ USE ONLY

ISSUE DATE

ISSUED BY

POS #

DATE PAID

RECEIVED BY

DAQ REVIEW: _____ DATE: _____

BLASTING APPROVAL (if applicable): _____ DATE: _____

DEMOLITION APPROVAL (if applicable): _____ DATE: _____

COMPLIANCE AREA ASSIGNMENT: _____ Hydrographic Area: _____

☐ Airport ☐ Blasting ☐ Commercial ☐ Demo-Structure ☐ Demo-Other ☐ Staging/Stockpiling

☐ Highway ☐ Schools ☐ Residential ☐ Public Works ☐ Flood Detention ☐ Utilities ☐ Misc.



DUST MITIGATION PLAN FOR ALL PROJECTS

Project Name: _____

Permittee Name: _____

Identify the Project Soil “Particulate Emission Potential” (check all that apply):

Using silt and optimum moisture content to determine the particulate emission potential (PEP) is the preferred method.

☐ PEP determined using generalized PEP determination maps included in the Dust Control Handbook.

☐ PEP determined using silt vs. optimum moisture table in Figure 2 of the Dust Control Handbook.

Percentage of silt through a #200 sieve: ____% Optimum moisture content: ____%

PEP for this project is determined to be:

☐ High ☐ Moderate High ☐ Moderate Low ☐ Low

Water source: ☐ Hydrant with Jones Valve ☐ Fire hose ☐ Water trucks/pulls ☐ Well
☐ Stand tanks ☐ Ponds ☐ Other: _____

PROJECT ACTIVITIES CHECKLIST

Instructions:

Place a check mark in the box to the right of each Project Activity that will occur on your project. If additional soil disturbing activities that are not on the checklist are to be included in the project, list them on a separate page and provide a description. For a more complete description of the listed activities, see the Control Measures Selection Pages (Form DCP03) that follow or refer to the Best Management Practices for dust control in the Dust Control Handbook.

BMP 10 Disturbed Soil and BMP 20 Trackout Prevention and Cleanup must be marked for every Dust Mitigation Plan.

CONTROL MEASURES SELECTION PAGES

Instructions:

For each project activity that you have selected on the Project Activities Checklist you must include the corresponding Control Measures Selection Page. Read and understand each item listed as a “Requirement” on these included pages. Where control measure options are listed, place a check in the box in front of the control measure you will use to meet that requirement. You must select at least one control measure where a choice is listed. In addition you must select the control measure that corresponds to your PEP as listed above, if applicable.

NOTE: PROJECTS 10 ACRES AND LARGER MUST COMPLETE A SUPPLEMENT TO THE DUST MITIGATION PLAN (APPENDIX B-1 AND B-2).



PROJECT ACTIVITIES CHECKLIST

Project Name: _____

Permittee Name: _____

PLACE A CHECK MARK NEXT TO EVERY ACTIVITY THAT WILL BE CONDUCTED ON THIS SITE, FOR EACH CHECKED ACTIVITY COMPLETE THE CORRESPONDING CONTROL MEASURES SELECTION PAGE AND INCLUDE WITH APPLICATION.

BMP	Project Activity	Check All That Apply
01	Backfilling Filling area previously excavated or trenched.	<input type="checkbox"/>
02	Blasting - Abrasive Sandblasting and/or abrasive blasting.	<input type="checkbox"/>
03	Blasting Soil & Rock Explosive blasting of soil and rock.	<input type="checkbox"/>
04	Clearing & Grubbing Clearing and grubbing for site preparation and vacant land cleanup.	<input type="checkbox"/>
05	Clearing Forms, Foundations and Slabs Clearing and cleaning of forms, foundations and slabs prior to pouring concrete.	<input type="checkbox"/>
06	Crushing Crushing of construction and demolition debris, rock and soil.	<input type="checkbox"/>
07	Cut and/or Fill Cut and/or fill soils for site grade preparation.	<input type="checkbox"/>
08	Demolition - Implosion Implosive demolition of a structure, using explosives.	<input type="checkbox"/>
09	Demolition - Mechanical/Manual Mechanical and manual demolition of walls, stucco, concrete, freestanding structures, buildings, load-bearing walls and/or removal of transit pipe	<input type="checkbox"/>
10	Disturbed Soil THIS ACTIVITY MUST BE SELECTED FOR ALL PROJECTS Disturbed soil throughout project including between structures.	<input type="checkbox"/>
11	Disturbed Land - Long Term Stabilization Large tracts of disturbed land that will not have continuing activity for more than 30 days.	<input type="checkbox"/>
12	Dust Suppressants - Selection and Use Selection and use of chemical and organic dust suppressing agents and other dust palliatives.	<input type="checkbox"/>
13	Importing/Exporting Materials Importing or exporting of soil, aggregate, decorative rock, debris, Type II and other bulk material.	<input type="checkbox"/>
14	Landscaping Installation of sod, decorative rock, desert or other landscape material.	<input type="checkbox"/>
15	Paving/Subgrade Preparation Subgrade preparation for paving streets, parking lots, etc.	<input type="checkbox"/>
16	Sawing/Cutting Material Sawing or cutting materials such as concrete, asphalt, block or pipe.	<input type="checkbox"/>
17	Screening Screening of rock, soil or construction debris.	<input type="checkbox"/>
18	Staging Areas Staging areas, equipment storage, vehicle parking lots, and material storage areas.	<input type="checkbox"/>
19	Stockpiles Stockpiling of materials, such as Type II, other soils, rock or debris, for future use or export.	<input type="checkbox"/>
20	Trackout Prevention and Cleanup THIS ACTIVITY MUST BE SELECTED FOR ALL PROJECTS Prevention and cleanup of mud, silt and soil tracked out onto paved roads.	<input type="checkbox"/>
21	Traffic - Unpaved Routes and Parking Construction related traffic on unpaved interior and/or access roads and unpaved employee/worker parking areas.	<input type="checkbox"/>
22	Trenching Trenching with track or wheel mounted excavator, shovel, backhoe or trencher.	<input type="checkbox"/>
23	Truck Loading Loading trucks with materials including construction and demolition debris, rock and soil.	<input type="checkbox"/>

BACKFILLING**BMP 01**

**YOU MUST SELECT AT LEAST ONE CONTROL MEASURE FOR EACH REQUIREMENT.
PLACE A CHECK IN THE BOX IN FRONT OF YOUR SELECTION.**

Requirement: Stabilize backfill material when not actively handling.

- ☐ 01-1 Water backfill material to maintain moisture or to form crust when not actively handling.
- ☐ 01-2 Apply and maintain a dust palliative to backfill material to form crust when not actively handling.
- ☐ 01-3 Cover or enclose backfill material when not actively handling.

Requirement: Stabilize backfill material during handling.

- ☐ 01-4 Empty loader bucket slowly and minimize drop height from loader bucket.
- ☐ 01-5 Dedicate water truck or large hose to backfilling equipment and apply water as needed.

Note: Select at least one of the above; in addition the appropriate control measure for your soil type must be selected from the following.

- ☐ 01-6 **L:** Mix moist soil with dry soil until the optimum moisture is reached.
- ☐ 01-7 **ML:** Apply and mix water into the backfill material until optimum moisture is reached.
- ☐ 01-8 **MH:** Apply and mix water and tackifier solution into the backfill material until optimum moisture is reached.
- ☐ 01-9 **H:** Apply and mix water and surfactant solution into the backfill material until optimum moisture is reached.

Requirement: Stabilize soil at completion of backfilling activity.

- ☐ 01-10 Apply water and maintain disturbed soils in a stable condition until permanent stabilization is complete.
- ☐ 01-11 Apply and maintain a dust palliative on disturbed soils to form a crust following backfilling activity.

Requirement: Stabilize material while using pipe padder equipment.

- ☐ 01-12 Mix moist soil with dry soil until the optimum moisture is reached.
- ☐ 01-13 Dedicate water truck or large hose to equipment and apply water as needed.

BLASTING – Abrasive**BMP 02**

**YOU MUST SELECT AT LEAST ONE CONTROL MEASURE FOR EACH REQUIREMENT.
PLACE A CHECK IN THE BOX IN FRONT OF YOUR SELECTION.**

Requirement: Stabilize surface soils where support equipment and vehicles will operate.

- ☐ 02-1 Pre-water and maintain surface soils in a stabilized condition where support equipment and vehicles will operate.
- ☐ 02-2 Apply and maintain a dust palliative on surface soils where support equipment and vehicles will operate.

Requirement: Limit visible emissions to no more than an average of 40% opacity for any period aggregating 3 minutes in any 60-minute period pursuant to Air Quality Regulations.

- ☐ 02-3 Hydro-blasting, using water as the propellant, must be conducted in a manner to maintain visible emissions within opacity standards.
- ☐ 02-4 Dry, unconfined blasting with abrasive material must use only those abrasives that are approved and certified by the California Air Resources Board (CARB) for such use (see Attachment 3: CARB-Approved Abrasives Information).

Requirement: Stabilize particulate matter in surrounding area following blasting.

- ☐ 02-5 Clean particulate material from surrounding area and water disturbed soils following blasting.
- ☐ 02-6 Apply and maintain a dust palliative to surrounding area following blasting.

Recommendation: Abrasive blasting should be conducted within an enclosed structure whenever possible to preclude the release of visible emissions to the atmosphere.

BLASTING – Soil and Rock**BMP 03**

**YOU MUST SELECT AT LEAST ONE CONTROL MEASURE FOR EACH REQUIREMENT.
PLACE A CHECK IN THE BOX IN FRONT OF YOUR SELECTION.**

Requirement: A Blasting Supplemental form must be filled out, submitted and approved by the DAQ prior to any blasting (see Appendix A: Dust Control Permit Supplemental Forms)

Requirement: No blasting within 1,500 feet of a residential area, occupied building or major roadway, when wind direction is toward these structures.

Requirement: Blasting shall be between the hours of 8:00 a.m. and 4:30 p.m., excluding Saturdays, Sundays and holidays unless prior permission is obtained from the Control Officer.

Requirement: No blasting allowed when the National Weather Service forecasts wind gusts above 25 miles per hour (mph).

- ☐ 03-1 Prior to setting explosive charges in holes, document current and predicted weather conditions as provided by the National Weather Service. If the current forecast is for wind gusts of 25 mph or greater or they are forecasted to be 25 mph or greater within the next 24 hours, do not charge any blast holes. When setting explosive charges, monitor weather reports for wind gusts of 25 mph or greater on the National Weather Service Radio and/or Internet sites. If wind gusts above 25 mph are stated, discontinue charging additional blast holes. Limit the blast to holes charged at time the wind report is made.

Requirement: Stabilize surface soils where drills, support equipment and vehicles will operate.

- ☐ 03-2 Pre-water and maintain surface soils in a stabilized condition where drills, support equipment and vehicles will operate.
- ☐ 03-3 Apply and maintain a dust palliative on surface soils where drills, support equipment and vehicles will operate.

(Continued on next page.)

Requirement: Stabilize soil during blast preparation activities.

- ☐ 03-4 Limit the blast footprint area to no larger than what can be practically stabilized immediately following the blast.
- ☐ 03-5 Maintain surface rock and vegetation where possible to reduce exposure of disturbed soil to wind.

Note: Select at least one of the above; in addition the appropriate control measure for your soil type must be selected from the following.

- ☐ 03-6 **L & ML:** Presoak surface soils to depth of the caliche or bedrock with water using water trucks, water pulls, sprinklers or wobblers.
- ☐ 03-7 **MH:** Presoak surface soils to depth of the caliche or bedrock with water and tackifier mixture using water trucks, water pulls, sprinklers or wobblers.
- ☐ 03-8 **H:** Presoak surface soils to depth of the caliche or bedrock with water and surfactant mixture using water trucks, water pulls, sprinklers or wobblers.

Requirement: Stabilize soil after blasting.

- ☐ 03-9 Water disturbed soils to form crust immediately following blast and safety clearance.
- ☐ 03-10 Apply and maintain a dust palliative to form crust immediately following blast and safety clearance.

See also: BMP 11: DISTURBED LAND – Long-Term Stabilization, if no continuing activity will occur within 30 days.

CLEARING AND GRUBBING**BMP 04**

**YOU MUST SELECT AT LEAST ONE CONTROL MEASURE FOR EACH REQUIREMENT.
PLACE A CHECK IN THE BOX IN FRONT OF YOUR SELECTION.**

Requirement: Stabilize surface soils where support equipment and vehicles will operate.

- ☐ 04-1 Pre-water and maintain surface soils in a stabilized condition where support equipment and vehicles will operate.
- ☐ 04-2 Apply and maintain a dust palliative on surface soils where support equipment and vehicles will operate.

Requirement: Stabilize soil during clearing and grubbing activities.

- ☐ 04-3 **L & ML:** Apply water during clearing and grubbing activities.
- ☐ 04-4 **MH:** Apply water and tackifier mixture during clearing and grubbing activities.
- ☐ 04-5 **H:** Apply water and surfactant mixture during clearing and grubbing activities.

Requirement: Stabilize disturbed soil immediately after clearing and grubbing activities.

- ☐ 04-6 Water disturbed soils to form crust immediately following clearing and grubbing activities.
- ☐ 04-7 Apply and maintain a dust palliative on disturbed soils to form crust immediately following clearing and grubbing activities.

Recommendations: Maintain live perennial vegetation and desert pavement where possible.

See also: BMP 11: DISTURBED LAND – Long-Term Stabilization, if no continuing activity will occur within 30 days.

CLEARING FORMS, FOUNDATIONS AND SLABS**BMP 05**

**YOU MUST SELECT AT LEAST ONE CONTROL MEASURE FOR EACH REQUIREMENT.
PLACE A CHECK IN THE BOX IN FRONT OF YOUR SELECTION.**

Requirement: Limit visible emissions to no more than an average of 20% opacity for any period aggregating 3 minutes in any 60-minute period pursuant to Air Quality Regulations.

- ☐ 05-1 Use single stage pours, unless prohibited by engineering design or building code, to minimize clearing.

Note: At least one of the following must be selected.

- ☐ 05-2 Use water spray to clear forms, foundations and slabs.
- ☐ 05-3 Use sweeping and water spray to clear forms, foundations and slabs.
- ☐ 05-4 Use industrial vacuum to clear forms, foundations and slabs prior to the use of high pressure air to blow soil and debris.
- ☐ 05-5 Use industrial vacuum to clear forms, foundations and slabs.

Recommendations: Verify Building Code Restrictions for use of water on slabs.

Avoid use of high pressure air to blow soil and debris from forms, foundations and slabs.

CRUSHING**BMP 06**

**YOU MUST SELECT AT LEAST ONE CONTROL MEASURE FOR EACH REQUIREMENT.
PLACE A CHECK IN THE BOX IN FRONT OF YOUR SELECTION.**

Requirement: Obtain the appropriate Operating Permit for powered crushers prior to engaging in crushing activity. Comply with permit conditions.

Requirement: Stabilize surface soils where support equipment and vehicles will operate.

- ☐ 06-1 Pre-water and maintain surface soils in a stabilized condition where support equipment and vehicles will operate.
- ☐ 06-2 Apply and maintain a dust palliative to surface soils where support equipment and vehicles will operate.

Requirement: Stabilize material before crushing.

- ☐ 06-3 Pre-water material prior to loading into crusher.
- ☐ 06-4 Test material to determine moisture content and silt loading, crush only material that is at optimum moisture content.

Requirement: Stabilize material during crushing.

- ☐ 06-5 Apply water to stabilize material so as to remain in compliance with opacity standards and permit conditions, during crushing.
- ☐ 06-6 Monitor emissions opacity. Make adjustments to remain in compliance with opacity standards and permit conditions.

Requirement: Stabilize material after crushing.

- ☐ 06-7 Water crushed material to form crust immediately following crushing.
- ☐ 06-8 Apply and maintain a dust palliative to crushed material.

See also: BMP 19. STOCKPILING

CUT AND FILL**BMP 07**

**YOU MUST SELECT AT LEAST ONE CONTROL MEASURE FOR EACH REQUIREMENT.
PLACE A CHECK IN THE BOX IN FRONT OF YOUR SELECTION.**

Requirement: Stabilize surface soils where support equipment and vehicles will operate.

- ☐ 07-1 Pre-water and maintain surface soils in a stabilized condition where support equipment and vehicles will operate.
- ☐ 07-2 Apply and maintain a dust palliative to surface soils where support equipment and vehicles will operate.

Requirement: Pre-water soils.

- ☐ 07-3 Dig a test hole to depth of cut or equipment penetration to determine if soils are moist at depth. Continue to pre-water if not moist to depth of cut.
- ☐ 07-4 **L & ML:** Pre-water with sprinklers or wobblers to allow time for penetration.
- ☐ 07-5 **L & ML:** Pre-water with water trucks or water pulls to allow time for penetration.
- ☐ 07-6 **MH:** Pre-water with a water and tackifier mixture using sprinklers or wobblers to allow time for penetration.
- ☐ 07-7 **MH:** Pre-water with a water and tackifier mixture using water trucks or water pulls to allow time for penetration.
- ☐ 07-8 **H:** Pre-water with a water and surfactant mixture using sprinklers or wobblers to allow time for penetration.
- ☐ 07-9 **H:** Pre-water with a water and surfactant mixture using water trucks or water pulls to allow time for penetration.

Requirement: Stabilize soil during cut activities.

- ☐ 07-10 Apply water, using water truck or water pull, to depth of cut prior to subsequent cuts.
- ☐ 07-11 No cut activities fill only.

Requirement: Stabilize soil after cut and fill activities.

- ☐ 07-12 Water disturbed soils to form crust following fill and compaction.
- ☐ 07-13 Apply and maintain a dust palliative on disturbed soils to form crust following fill and compaction.

See also: BMP 11: DISTURBED LAND – Long-Term Stabilization if no continuing activity will occur within 30 days.

DEMOLITION – Implosion**BMP 08**

**YOU MUST SELECT AT LEAST ONE CONTROL MEASURE FOR EACH REQUIREMENT.
PLACE A CHECK IN THE BOX IN FRONT OF YOUR SELECTION.**

Requirement: A Demolition Supplemental form (see Appendix A) and a Supplement To The Dust Mitigation Plan (see Appendix B) must be filled out, submitted and approved by the Control Officer prior to implosion.

Requirement: An asbestos survey must be conducted on any facility before demolition can commence.

Requirement: A complete Clark County NESHAP Notification form must be submitted to the DAQ at least ten working days prior to demolition. The asbestos survey must be attached to this notification.

Requirement: All friable and non-friable asbestos containing material must be removed from the facility prior to implosion.

Requirement: Confine blasting to times when wind direction is away from closest residential areas, occupied buildings and major roadways.

Requirement: Implosion time must be pre-approved by the Control Officer.

Requirement: Monitor and document current weather conditions and weather predictions from National Weather Service.

- ☐ 08-1 Prior to setting explosive charges, obtain and document current and predicted weather conditions as provided by the National Weather Service. If wind advisory (over 20 miles per hour gusts or average wind speed of 10 miles per hour) is current or forecasted for blast period, do not set charges and do not blast. Maintain a calibrated anemometer and log ambient air velocity and direction within 1,000 feet of the implosion site, beginning at least 1 (one) hour prior to and 15 minutes after the implosion.

(Continued on next page)

Requirement: Stabilize surface area where support equipment and vehicles will be operated.

- ☐ 08-2 Restrict support equipment and vehicles to existing paved and/or stable areas.

Note: You must select one of the following if paved and/or stable areas do not already exist and you have not selected 08-2.

- ☐ 08-3 Pre-water and maintain surface soils in a stabilized condition where support equipment and vehicles will operate.
- ☐ 08-4 Apply and maintain a dust palliative on surface soils where support equipment and vehicles will be operated.

Requirement: Stabilize demolition debris immediately following blast and safety clearance.

- ☐ 08-5 Apply water to debris immediately following blast and safety clearance.
- ☐ 08-6 Apply and maintain a dust palliative to debris immediately following blast and safety clearance.

Requirement: Stabilize and clean surrounding area immediately following blast and safety clearance.

- ☐ 08-7 Water all disturbed soil surfaces to establish crust and prevent wind erosion of soil.
- ☐ 08-8 Thoroughly clean blast debris from paved and other surfaces following blast and safety clearance.

See also: BMP 23: TRUCK LOADING.

DEMOLITION - Mechanical/Manual**BMP 09**

**YOU MUST SELECT AT LEAST ONE CONTROL MEASURE FOR EACH REQUIREMENT.
PLACE A CHECK IN THE BOX IN FRONT OF YOUR SELECTION.**

Requirement: For renovation or demolition of a structure, a Demolition Supplemental form (see Appendix A) must be filled out, submitted and approved by the Control Officer prior to commencing demolition.

Requirement: An asbestos survey must be conducted on any facility or structure that is subject to NESHAP requirements before demolition can commence.

Requirement: A complete Clark County NESHAP Notification form must be submitted to the DAQ at least ten working days prior to demolition. The asbestos survey must be attached to this notification.

Requirement: Stabilize surface soils where support equipment and vehicles will operate.

- ☐ 09-1 Pre-water and maintain surface soils in a stabilized condition where support equipment and vehicles will operate.
- ☐ 09-2 Apply and maintain a dust palliative to surface soils where support equipment and vehicles will operate.
- ☐ 09-3 Area where support equipment and vehicles will operate is completely covered with paving or concrete.

Requirement: Stabilize demolition debris during handling.

- ☐ 09-4 Apply water to demolition debris during handling.

Requirement: Stabilize debris following demolition.

- ☐ 09-5 Apply water to stabilize demolition debris.
- ☐ 09-6 Apply a dust palliative to stabilize demolition debris.

Requirement: Stabilize surrounding area following demolition.

- ☐ 09-7 Apply water to stabilize surrounding area following demolition.
- ☐ 09-8 Apply and maintain a dust palliative to stabilize surrounding area following demolition.

See also: BMP 23: TRUCK LOADING.

DISTURBED SOIL**BMP 10**

**YOU MUST SELECT AT LEAST ONE CONTROL MEASURE FOR EACH REQUIREMENT.
PLACE A CHECK IN THE BOX IN FRONT OF YOUR SELECTION.**

Requirement: For each non-linear project to be permitted for 5 acres or less; install perimeter wind barrier 3 feet or more in height made of material with a porosity of 50% or less.

Requirement: Limit vehicle traffic and disturbance of soils where possible.

- ☐ 10-1 Limit vehicle traffic and disturbance of soils with the use of fencing, barriers, barricades, and/or wind barriers.

Requirement: Stabilize and maintain stability of all disturbed soil throughout construction site.

Note: You must choose one or more of the following.

- ☐ 10-2 Apply water to stabilize disturbed soils. Soils must be kept in a sufficiently damp, crusted or covered condition.
- ☐ 10-3 Apply and maintain a dust palliative based on soil type and future plans.

Requirement: Soil conditions, including preventive and corrective measures, must be recorded every day the construction project is active.

- ☐ 10-4 Record soil conditions and dust control actions in daily project records.

Recommendations: If interior block walls are planned, install as early in the construction as possible.

See also: BMP 11: DISTURBED LAND – Long-Term Stabilization, if no continuing activity will occur within 30 days.

DISTURBED LAND – Long-Term Stabilization**BMP 11**

**YOU MUST SELECT AT LEAST ONE CONTROL MEASURE FOR EACH REQUIREMENT.
PLACE A CHECK IN THE BOX IN FRONT OF YOUR SELECTION.**

Requirement: Stabilize soil to meet standards required by Air Quality Regulation Section 90.

- ☐ 11-1 Apply and maintain a dust palliative on disturbed soils for long-term stabilization.
- ☐ 11-2 Stabilize disturbed soil with vegetation for long-term stabilization.
- ☐ 11-3 Pave or apply surface rock for long-term stabilization.
- ☐ 11-4 Use wind breaks in accordance with a site-specific plan approved by the Control Officer and Region IX Administrator of the EPA.
- ☐ 11-5 Apply water and maintain soils in a visible damp or crusted condition for temporary stabilization.

Requirement: Prevent access to limit soil disturbance.

- ☐ 11-6 Prevent access by fencing, ditches, vegetation, berms or other suitable barrier or means approved by the Control Officer.

Recommendations: Plant perimeter vegetation early. Use of native and drought-tolerant plants with greater than 50 % silhouette area is encouraged.

See also: BMP 12: DUST SUPPRESSANT, DUST PALLIATIVE AND SURFACTANT – Selection and Use.

DUST PALLIATIVE – Selection and Use

BMP 12

**YOU MUST SELECT AT LEAST ONE CONTROL MEASURE FOR EACH REQUIREMENT.
PLACE A CHECK IN THE BOX IN FRONT OF YOUR SELECTION.**

Requirement: Follow AQD “Interim Policy on Dust Palliatives Use In Clark County, Nevada”.

Requirement: Record use of suppressants and dust palliatives and retain records.

Requirement: Follow applicable federal and state regulations.

Requirement: Select method of long-term stabilization taking into consideration future land use.

- ☐ 12-1 For traffic area applications use Table 1: Traffic Area Application Requirements, Appropriate Use of Liquid Dust Palliatives and Application Rates, from the Interim Policy on Dust Palliatives Use In Clark County, Nevada.
- ☐ 12-2 For non-traffic area applications use Table 2: Non-Traffic Area Application Requirements, Appropriate Use of Liquid Dust Palliatives and Application Rates, from the Interim Policy on Dust Palliatives Use In Clark County, Nevada.

IMPORTING/EXPORTING SOIL, ROCK AND OTHER BULK MATERIAL

BMP 13

**YOU MUST SELECT AT LEAST ONE CONTROL MEASURE FOR EACH REQUIREMENT.
PLACE A CHECK IN THE BOX IN FRONT OF YOUR SELECTION.**

Requirement: Limit visible dust opacity from vehicular operations.

- ☐ 13-1 Apply water and limit vehicle speeds to 15 mph on the work site.
- ☐ 13-2 Apply and maintain dust suppressant on haul routes.

Requirement: Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage.

Requirement: Maintain 3-6 inches of freeboard to minimize spillage.

Requirement: Stabilize materials during transport on site.

- ☐ 13-3 Use tarps or other suitable enclosures on haul trucks.
- ☐ 13-4 Stabilize materials with water.

Requirement: Clean wheels and undercarriage of haul trucks prior to leaving construction site.

Recommendations: Verify State and local laws, concerning the hauling of bulk materials on public roadways.

See also: BMP 20: TRACKOUT PREVENTION AND CLEANUP.

BMP 23: TRUCK LOADING.

LANDSCAPING**BMP 14**

**YOU MUST SELECT AT LEAST ONE CONTROL MEASURE FOR EACH REQUIREMENT.
PLACE A CHECK IN THE BOX IN FRONT OF YOUR SELECTION.**

Requirement: Stabilize soils, materials and slopes during handling.

- ☐ 14-1 **L & ML:** Apply water prior to leveling or any other earth moving activity to keep the soil moist throughout the process.
- ☐ 14-2 **MH:** Apply a water and tackifier mixture prior to leveling or any other earth moving activity to keep the soil moist throughout the process.
- ☐ 14-3 **H:** Apply a water and surfactant mixture prior to leveling or any other earth moving activity to keep the soil moist throughout the process.

Requirement: Stabilize soils, materials and slopes at completion of activity.

- ☐ 14-4 Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slope.
- ☐ 14-5 Apply water and maintain sloping surfaces in a crusted condition.
- ☐ 14-6 Maintain effective cover over materials.

PAVING/SUBGRADE PREPARATION**BMP 15**

**YOU MUST SELECT AT LEAST ONE CONTROL MEASURE FOR EACH REQUIREMENT.
PLACE A CHECK IN THE BOX IN FRONT OF YOUR SELECTION.**

Requirement: Stabilize soils prior to activities.

- ☐ 15-1 Pre-water subgrade surface until optimum moisture content is reached and maintained.

Requirement: Stabilize soils during activities.

- ☐ 15-2 Maintain at least 70% of optimum moisture content for Type II material while aggregate is being applied.

Requirement: Stabilize soils following activities.

- ☐ 15-3 Place tack coat on Type II aggregate base immediately after it is applied.
- ☐ 15-4 Apply water to Type II aggregate base immediately after it is applied.

Requirement: Stabilize adjacent disturbed soils following paving activities.

- ☐ 15-5 Stabilize adjacent disturbed soils following paving activities by crusting with water.
- ☐ 15-6 Stabilize adjacent disturbed soils following paving activities by applying a dust palliative.
- ☐ 15-7 Stabilize adjacent disturbed soils following paving activities with immediate landscaping activity or installation of vegetative or rock cover.
- ☐ 15-8 There are no soils adjacent to paving activities.

SAWING/CUTTING MATERIALS

BMP 16

**YOU MUST SELECT AT LEAST ONE CONTROL MEASURE FOR EACH REQUIREMENT.
PLACE A CHECK IN THE BOX IN FRONT OF YOUR SELECTION.**

**Requirement: Limit visible emissions to no more than an average of 20% opacity,
pursuant to Air Quality Regulations.**

- ☐ 16-1 Use water to control dust when cutting materials.
- ☐ 16-2 Use a vacuum to collect dust when cutting materials.

SCREENING**BMP 17**

**YOU MUST SELECT AT LEAST ONE CONTROL MEASURE FOR EACH REQUIREMENT.
PLACE A CHECK IN THE BOX IN FRONT OF YOUR SELECTION.**

**Requirement: If using a powered screen, obtain the appropriate Operating Permit for powered screens prior to engaging in screening activity.
Comply with permit conditions.**

Requirement: Drop material through the screen slowly and minimize drop height.

Requirement: Stabilize surface soils where support equipment and vehicles will operate.

- ☐ 17-1 Pre-water and maintain surface soils in a stabilized condition where support equipment and vehicles will operate.
- ☐ 17-2 Apply and maintain a dust palliative on surface soils where support equipment and vehicles will operate.

Requirement: Pre-treat material prior to screening.

- ☐ 17-3 Apply sufficient water to obtain at least 70% optimum moisture in material prior to screening.
- ☐ 17-4 Apply a dust suppressant to material prior to screening.

Requirement: Stabilize material during screening.

- ☐ 17-5 Dedicate water truck or large hose to screening operation and apply water as needed to prevent dust.
- ☐ 17-6 Apply water to material as it is being dropped through the screen.
- ☐ 17-7 Install wind barrier upwind of screen as high as the screen drop point and made of material with a porosity of 50% or less.

Requirement: Stabilize material and surrounding area immediately after screening.

- ☐ 17-8 Apply water to stabilize screened material and surrounding area after screening.
- ☐ 17-9 Apply and maintain a dust palliative to stabilize screened material and surrounding area after screening.

See also: BMP 19: STOCKPILING

STAGING AREAS**BMP 18**

**YOU MUST SELECT AT LEAST ONE CONTROL MEASURE FOR EACH REQUIREMENT.
PLACE A CHECK IN THE BOX IN FRONT OF YOUR SELECTION.**

Requirement: Limit visible dust opacity from vehicular operations.

- ☐ 18-1 Limit vehicle speeds to 15 mph in the staging area and on all unpaved access routes.
- ☐ 18-2 Apply and maintain dust suppressant on all vehicle traffic areas in the staging areas and unpaved access routes.

Requirement: Stabilize staging area soils during use.

- ☐ 18-3 Pre-water and maintain surface soils in a stabilized condition where support equipment and vehicles will operate.
- ☐ 18-4 Apply and maintain a dust palliative to surface soils where support equipment and vehicles will be operated.

Requirement: Stabilize staging area soils at project completion.

- ☐ 18-5 Apply a dust palliative.
- ☐ 18-6 Apply screened or washed Type II aggregate.
- ☐ 18-7 Use wind breaks in accordance with a site-specific plan approved by the Control Officer and Region IX Administrator of the EPA.
- ☐ 18-8 Pave with thin paving.
- ☐ 18-9 Completed project will cover staging area with buildings, paving, and/or landscaping.
- ☐ 18-10 Apply water to form adequate crust and prevent access.

Recommendations: Limit size of staging areas.

Limit ingress and egress points.

See also: BMP 20: TRACKOUT PREVENTION AND CLEANUP

STOCKPILING**BMP 19**

**YOU MUST SELECT AT LEAST ONE CONTROL MEASURE FOR EACH REQUIREMENT.
PLACE A CHECK IN THE BOX IN FRONT OF YOUR SELECTION.**

Requirement: To the extent possible, maintain stockpile to avoid steep sides or faces.

Requirement: Stockpile location and height must be maintained pursuant to Air Quality Regulations. Stockpiles located within 100 yards of occupied buildings must not be constructed over 8 feet in height.

- ☐ 19-1 Stockpiles will not be constructed over 8 feet in height.
- ☐ 19-2 Stockpiles will be constructed over 8 feet high and must have a road bladed to the top to allow water truck access or must have a sprinkler irrigation system installed, used and maintained

Requirement: Stabilize surface soils where support equipment and vehicles will operate.

- ☐ 19-3 Pre-water and maintain surface soils in a stabilized condition where support equipment and vehicles will operate.
- ☐ 19-4 Apply and maintain a dust palliative on surface soils where support equipment and vehicles will operate.

Requirement: Stabilize stockpile materials during handling.

- ☐ 19-5 Maintain stockpile materials with at least 70% optimum moisture content.
- ☐ 19-6 Remove material from the downwind side of the stockpile, when safe to do so.

Note: Select at least one of the above; in addition the appropriate control measure for your soil type must be selected from the following.

- ☐ 19-7 **L & ML:** Apply water during stacking, loading and unloading operations.
- ☐ 19-8 **MH:** Apply a water and tackifier mixture during stacking, loading and unloading operations.
- ☐ 19-9 **H:** Apply a water and surfactant mixture during stacking, loading and unloading operations.

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Requirement: Stabilize stockpiles at completion of activity.

- ☐ 19-10 Water stockpiles to form a crust immediately at the completion of activity.
- ☐ 19-11 Apply and maintain a dust palliative to all outer surfaces of the stockpiles.
- ☐ 19-12 Provide and maintain wind barriers on 3 sides of the pile, whose length is no less than equal to the length of the pile, whose distance from the pile is no more than twice the height of the pile, whose height is equal to the pile height, and made of material with a porosity of 50% or less.
- ☐ 19-13 Apply a cover or screen to stockpiles.

TRACKOUT PREVENTION AND CLEANUP**BMP 20**

**YOU MUST SELECT AT LEAST ONE CONTROL MEASURE FOR EACH REQUIREMENT.
PLACE A CHECK IN THE BOX IN FRONT OF YOUR SELECTION.**

Requirement: In soils that have a PEP classification of “High”, pave construction activities roadways as early as possible.

Requirement: Use of soil to create a ramp for vehicle access over a curb is prohibited.

Requirement: Trackout conditions, including preventive and corrective measures, must be recorded daily for every day that the construction project access is used by vehicles.

- ☐ 20-1 Record soil conditions and dust control actions in daily project records.

Requirement: Prevent dust from trackout.

- ☐ 20-2 Immediately clean trackout from paved surfaces to maintain dust control. Trackout must not extend 50 feet or more.
- ☐ 20-3 Maintain dust control during working hours and clean trackout from paved surfaces at the end of the work shift/day. Trackout must not extend 50 feet or more and must be cleaned daily, at minimum.

Requirement: Install and maintain trackout control devices in effective condition at all access points where paved and unpaved access or travel routes intersect.

- ☐ 20-4 Install gravel pad(s) consisting of 1” to 3” rough diameter, clean, well-graded gravel or crushed rock. Minimum dimensions must be 30 feet wide by 3 inches deep, and, at minimum, 50’ or the length of the longest haul truck, whichever is greater. Re-screen, wash or apply additional rock in gravel pad to maintain effectiveness.
- ☐ 20-5 Install wheel shakers. Clean wheel shakers on a regular basis to maintain effectiveness.
- ☐ 20-6 Install wheel washers. Maintain wheel washers on a regular basis to maintain effectiveness.
- ☐ 20-7 Install wheel shakers in the event that trackout cannot be controlled with gravel pads.
- ☐ 20-8 Install wheel washer in the event that trackout cannot be controlled with gravel pads and wheel shakers.
- ☐ 20-9 Motorized vehicles will only operate on paved surfaces.

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CONTROL MEASURES SELECTION PAGES

Requirement: All exiting traffic must be routed over selected trackout control device(s).

- ☐ 20-10 Clearly establish and enforce traffic patterns to route traffic over selected trackout control device(s).
- ☐ 20-11 Limit site accessibility to routes with trackout control devices in place by installing effective barriers on unprotected routes.

TRAFFIC – Unpaved Routes and Parking Areas**BMP 21**

**YOU MUST SELECT AT LEAST ONE CONTROL MEASURE FOR EACH REQUIREMENT.
PLACE A CHECK IN THE BOX IN FRONT OF YOUR SELECTION.**

Requirement: Limit visible dust opacity from vehicular operations.

- ☐ 21-1 Limit vehicle speeds to 15 mph on all unpaved routes and parking areas.
- ☐ 21-2 Apply and maintain dust palliative on all vehicle travel areas.

Requirement: Stabilize all haul routes.

- ☐ 21-3 Apply water to haul routes and maintain in a stabilized condition.
- ☐ 21-4 Apply a dust palliative to haul routes and maintain in a stabilized condition.
- ☐ 21-5 Apply gravel to haul routes and maintain in a stabilized condition.
- ☐ 21-6 Supplement dust palliative or aggregate applications with watering, if necessary.

Requirement: Stabilize all off-road and parking areas.

- ☐ 21-7 Apply water to off-road traffic and parking areas and maintain in a stabilized condition.
- ☐ 21-8 Apply gravel to off-road traffic and parking areas and maintain in a stabilized condition.
- ☐ 21-9 Apply recycled asphalt (or other suitable material) to off-road traffic and parking areas and maintain in a stabilized condition.
- ☐ 21-10 Apply and maintain a dust palliative (designed for vehicle traffic) to off-road traffic and parking areas and maintain in a stabilized condition.

Recommendations: Use of bumps or dips for speed control is encouraged.

Apply paving as soon as possible to all future roadway areas for PEP categories other than "High".

TRENCHING**BMP 22**

**YOU MUST SELECT AT LEAST ONE CONTROL MEASURE FOR EACH REQUIREMENT.
PLACE A CHECK IN THE BOX IN FRONT OF YOUR SELECTION.**

Requirement: Stabilize surface soils where trenching equipment, support equipment and vehicles will operate.

- ☐ 22-1 Pre-water and maintain surface soils in a stabilized condition where trenching equipment, support equipment and vehicles will operate.
- ☐ 22-2 Apply and maintain a dust palliative to surface soils where trenching equipment, support equipment and vehicles will operate.

Requirement: Presoak soils prior to trenching activities.

- ☐ 22-3 Pre-water surface, pre-trench to 18" depth, soak soils via pre-trench prior to deep trenching.
- ☐ 22-4 **L & ML:** Presoak soil with water using sprinklers or wobblers.
- ☐ 22-5 **L & ML:** Presoak with water, using water truck and/or water pull.
- ☐ 22-6 **MH:** Presoak soil with a water and tackifier mixture using water pulls and/or water trucks.
- ☐ 22-7 **MH:** Presoak soil with a water and tackifier mixture using sprinklers or wobblers.
- ☐ 22-8 **H:** Presoak soil with a water and surfactant mixture using water pulls and/or water trucks.
- ☐ 22-9 **H:** Presoak soil with a water and surfactant mixture using sprinklers or wobblers.

Requirement: Stabilize soil during trenching activities.

- ☐ 22-10 **L & ML:** Complete trenching with a dedicated water truck or large hose maintaining water as needed to prevent dust.
- ☐ 22-11 **L & ML:** Use spray nozzles mounted on trenching machine.
- ☐ 22-12 **MH:** Complete trenching with a dedicated water truck or large hose maintaining a water and tackifier mixture as needed to prevent dust.
- ☐ 22-13 **H:** Complete trenching with a dedicated water truck or large hose maintaining a water and surfactant mixture as needed to prevent dust.

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Requirement: Stabilize soils at the completion of trenching activities.

- ☐ 22-14 Use water to form crust on excavated soil windrow as it is formed.
- ☐ 22-15 Use dust palliative to form crust on excavated soil windrow as it is formed.

Recommendations: Wash mud and soil from equipment at completion of trench to prevent crusting and drying of soil on equipment.

See also: BMP 01: BACKFILLING, if applicable.

TRUCK LOADING**BMP 23**

**YOU MUST SELECT AT LEAST ONE CONTROL MEASURE FOR EACH REQUIREMENT.
PLACE A CHECK IN THE BOX IN FRONT OF YOUR SELECTION.**

Requirement: Ensure all loads are covered prior to leaving the construction site and traveling on public roadways.

Requirement: Stabilize surface soils where loaders, support equipment and vehicles will operate.

- ☐ 23-1 Pre-water and maintain surface soils in a stabilized condition where loaders, support equipment and vehicles will operate.
- ☐ 23-2 Apply and maintain a dust palliative on surface soils where loaders, support equipment and vehicles will operate.

Requirement: Stabilize material during loading.

- ☐ 23-3 Empty loader bucket slowly and keep loader bucket close to the truck to minimize the drop height while dumping.

Note: You must selected 23-3 if PEP is greater than LOW, in addition one of the following must be selected.

- ☐ 23-4 **L & ML:** Mix material with water prior to loading.
- ☐ 23-5 **L & ML:** Spray material with water while loading.
- ☐ 23-6 **MH:** Mix material with a water and tackifier mixture prior to loading.
- ☐ 23-7 **MH:** Spray material with a water and tackifier mixture while loading.
- ☐ 23-8 **H:** Mix material with a water and surfactant mixture prior to loading.
- ☐ 23-9 **H:** Spray material with a water and surfactant mixture while loading.



CONSTRUCTION ACTIVITIES DUST CONTROL PERMIT SUPPLEMENTAL PERMITS/APPROVALS CHECKLIST

The following construction activities require permits or approval in addition to a Dust Control Permit. Permits or approvals must be obtained prior to conducting the activity. This form must be submitted with every Dust Mitigation Plan. *Check all activities that apply to the construction project.*

Activities requiring a Portable Source Permit:

(Comply with Portable Source requirements prior to installing this equipment on the project site.)

Operation of a:	<u>List Name of Company and/or Permit #</u>
<input type="checkbox"/> powered crusher at temporary locations.	_____
<input type="checkbox"/> powered screen at temporary locations.	_____
<input type="checkbox"/> concrete batch plant at temporary locations.	_____
<input type="checkbox"/> asphalt batch plant at temporary locations.	_____

Activities requiring Supplemental Permit:

(Submit applicable supplemental forms. Asbestos survey is required for any size demo/remodel. NESHAP notification is required for ANY size demolition or for remodel if RACM is found.)

- ☐ Blasting to fracture rock, hardpan, or caliche.
- ☐ Blasting to implode a structure.
- ☐ Demolition of a structure greater than 1,000 square feet.
 - ☐ Structural remodeling
 - ☐ Structure relocation

Activities requiring Authority to Construct (ATC) Certificate and Operating Permit:

(An ATC must be obtained prior to installation of this equipment/facility.)

- ☐ Construction of or installation of any Emission Unit

<input type="checkbox"/> Gasoline Dispensing Facility	<input type="checkbox"/> Plating Shop
<input type="checkbox"/> Cooling Tower	<input type="checkbox"/> Incinerator
<input type="checkbox"/> Dry Cleaning Equipment	<input type="checkbox"/> Boiler
<input type="checkbox"/> Emergency Standby Generator or Other Internal Combustion Engine	
<input type="checkbox"/> Woodworking Process Equipment	
<input type="checkbox"/> Power Generation Facility or Equipment	
<input type="checkbox"/> Crushing or Screening Stationary Source	
<input type="checkbox"/> Concrete or Asphalt Plant Stationary Source	
<input type="checkbox"/> Commercial Surface Coating Equipment including Paint Spray Booth	
<input type="checkbox"/> Other Source of PM ₁₀ , CO, VOC, NO _x , SO ₂ , Lead, Hazardous Air Pollutant, or Toxic Chemical Substance	

☐ Activities Listed Above Do Not Apply to this Construction Project:



CLARK COUNTY • DEPARTMENT OF AIR QUALITY

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(702) 455-5942 • Fax (702) 383-9994

For DAQ Use Only

Invoice Number: _____

APPLICATION FOR DUST CONTROL PERMIT MODIFICATION

Submit applicable fee per Section 18 of the Air Quality Regulations

1. PERMIT INFORMATION:

Permit Number: _____

Applicant/Permittee: _____

Project Name: _____

Email Address: _____

2. IS MODIFICATION REQUESTED AS A RESULT OF A CAO? ☐ Yes ☐ No

3. INFORMATION TO BE MODIFIED:

☐ **Control Measures:**

Attach Control Measure Selection Pages (DCP03) for all modifications.

☐ **Project Acreage:**

Acreage to be added: _____ Acreage to be removed: _____

Attach a revised Assessor's Parcel Map showing the originally permitted area and the area to be added/removed.

☐ **Supplemental Forms:**

☐ Blasting ☐ Demolition ☐ VLP: List permit number and/or company name.

Attach Supplemental forms and Control Measure Selection Pages.

☐ **Other:**

Attach modifications and/or current information.

4. SUBMITTED BY:

Signature

Print Name

Company Name/Title

Phone Number

Date

5. APPROVED BY:

DAQ Permitting Approval

Date

DAQ Asbestos/Removal Approval

Date

MODIFICATIONS SUBMITTED ON THIS FORM DO NOT CHANGE THE EXPIRATION DATE OF THE PERMIT.

ACREAGE ADDED WILL EXPIRE ON THE SAME DATE AS THE CURRENT PERMIT EXPIRATION.

PAYMENT INFORMATION TO BE COMPLETED BY THE APPLICANT

PAYING BY

(Please Print)

☐ CASH

☐ CHECK

CHECK # _____

NAME AND ADDRESS AS IT APPEARS ON CHECK:

Telephone #: _____

☐ CREDIT CARD

LAST FOUR DIGITS OF CREDIT CARD NUMBER: _____

EXACT NAME AS IT APPEARS ON CREDIT CARD:

ISSUE DATE

ISSUED BY

POS #

DATE PAID

RECEIVED BY

DAQ REVIEW: _____

DATE: _____

BLASTING APPROVAL (if applicable): _____

DATE: _____

DEMOLITION APPROVAL (if applicable): _____

DATE: _____

COMPLIANCE AREA ASSIGNMENT: _____ Hydrographic Area: _____

☐ Airport ☐ Blasting ☐ Commercial ☐ Demo-Structure ☐ Demo-Other ☐ Staging/Stockpiling

☐ Highway ☐ Schools ☐ Residential ☐ Public Works ☐ Flood Detention ☐ Utilities ☐ Misc.



**DUST CONTROL PERMIT
ADDRESS / CONTACT INFORMATION CHANGE**

No fees are required for these changes

1. CURRENT INFORMATION: Permit Number: _____

Permittee: _____

Project Name: _____

2. PERMITTEE ADDRESS CHANGE: Changing permittee requires the Transfer of Permit form (DCP 11)

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____ Ext: _____ Fax: _____

E-mail Address: _____

3. CONTACT INFORMATION CHANGE:

☐ **Point of Contact for dust control matters and to whom a NOTICE OF VIOLATION should be sent if necessary:**

Name: _____ Company: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____ Ext: _____ Fax: _____

Cellular/Pager: _____ After Hours Phone: _____

☐ **On-site Superintendent/Supervisor/Foreman contact:**

Name: _____ Company: _____

On-site phone: _____ Cellular/Pager: _____

DAQ Dust Class Certification/Card #: _____ Expiration date: _____

☐ **Dust Control Monitor:** Attach form DCP 09 (Construction Site Dust Control Monitor)

4. SUBMITTED BY:

Signature

Date

Print Name

Company Name/Title

(DAQ USE ONLY)

Entered by



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(702) 455-5942 • Fax (702) 383-9994

For DAQ Use Only
Invoice Number: _____

DUST CONTROL PERMIT RENEWAL FORM

1. PERMIT INFORMATION:

Permit Number: _____

Permittee Name: _____

Project Name: _____

E-Mail Address: _____

Currently permitted acreage: _____ Acreage to be renewed: _____

If renewal acreage is being modified from current acreage; attach revised map(s) showing total area to be included in renewed permit.

2. CONTACT INFORMATION – On-site Person:

Name: _____ Company: _____

Phone: _____ Dust Card Number: _____ Exp. date: _____

(Check any additional contacts to be modified or changed, list on separate page)

☐ Responsible Contact ☐ Dust Control Monitor (use form DCP 09)

3. INFORMATION TO BE CHANGED/MODIFIED:

☐ Control Measures:

Attach updated Project Activities Checklist (DCP 02). If adding Project Activities to current permit, include Control Measure Selection Pages (DCP 03) for each addition.

☐ Supplemental Forms:

☐ Blasting ☐ Demolition ☐ Other

Attach modified and/or current forms if renewal includes Blasting and/or Demolition, for all other forms attach only if there is a change from current approved permit.

PAYMENT INFORMATION TO BE COMPLETED BY THE APPLICANT

PAYING BY

(Please Print)

☐ CASH

☐ CHECK CHECK # _____

NAME AND ADDRESS AS IT APPEARS ON CHECK:

Telephone #: _____

☐ CREDIT CARD LAST FOUR DIGITS OF CREDIT CARD NUMBER: _____

EXACT NAME AS IT APPEARS ON CREDIT CARD: _____

By signing this permit application I certify that:

- A. I am authorized, on behalf of the individual or company listed in Section 1, as Applicant/Permittee, to apply for their Dust Control Permit and to commit to all of the terms and conditions of the requested permit.
- B. Construction activities will be limited to lands that the applicant/permittee either owns or is authorized to use for construction activities. The permit issued subsequent to this application is not a substitute for obtaining the property owners permission to use his land. Issuance of a Dust Control Permit is intended only for the purpose of controlling emissions of air pollutants and assuring compliance with Air Quality Regulations. The applicant/permittee agrees to hold harmless, indemnify, and defend Clark County, its employees and assigns from any claims that may arise due to any unauthorized use of land for construction activities.
- C. The permittee accepts responsibility for assuring that all contractors, subcontractors, and all other persons on the construction site covered by this permit, comply with the terms and conditions of the permit, the dust mitigation plan and all applicable Air Quality Regulations.
- D. The applicant/permittee understands that it is a condition of the permit that the permittee agrees to allow the inspection of the site for compliance with the terms and conditions of the permit and Air Quality Regulations at any time during the permittee's hours of operation by a DAQ officer without prior notice or at any time pursuant to the investigation of a complaint or upon direct observation of emission and/or failure to maintain Best Management Practices.
- E. I understand that any material misrepresentation made in this application may invalidate the permit and that Clark County may pursue enforcement action against me. In addition, I understand any willful misrepresentation may result in criminal penalties. I declare under penalty of perjury that the foregoing is true and correct.

Executed on:

DATE

SIGNATURE

PRINTED NAME

TITLE AND COMPANY NAME

FOR DAQ USE ONLY

DATE PAID

RECEIVED By

POS #

ISSUE DATE

ISSUED BY

DAQ REVIEW: _____

DATE: _____

BLASTING APPROVAL (if applicable): _____

DATE: _____

DEMOLITION APPROVAL (if applicable): _____

DATE: _____

COMPLIANCE AREA ASSIGNMENT: _____ Hydrographic Area: _____

☐ Airport ☐ Blasting ☐ Commercial ☐ Demo-Structure ☐ Demo-Other ☐ Staging/Stockpiling
☐ Highway ☐ Schools ☐ Residential ☐ Public Works ☐ Flood Detention ☐ Utilities ☐ Misc.



DUST PALLIATIVE INFORMATION

1. DUST CONTROL PERMIT INFORMATION: *(if applicable)*

Permit Number: _____

Applicant/Permittee: _____

Project Name: _____

2. DUST PALLIATIVE INFORMATION:

Project Address/Location: _____

Date of Application: _____ Acreage or Square Footage stabilized: _____

Product Name of Dust Palliative: _____

Type of Dust Palliative: _____

Dilution Rate: _____ Application Rate: _____

Method of Application (Topical/Blended): _____

☐ Traffic ☐ Non-Traffic Equipment Used: _____

3. APPLICATOR INFORMATION:

Company: _____

Address: _____

Contact Name: _____ Nevada Contractor's License #: _____

Phone Number: _____ FAX Number: _____

Is there a warrantee on services provided? ☐ Yes ☐ No

If yes, terms of warrantee: _____

If no, how long is the Dust Palliative expected to be effective: _____

Signature of Applicator: _____ Date: _____

4. SUBMITTED BY:

Signature: _____ Date: _____

Name: _____

Company Name/Title: _____



CERTIFICATE OF PROJECT COMPLETION

Submit completed form to DAQ or FAX to (702) 383-9994

1. PERMIT INFORMATION:

Permit Number: _____ Project Name: _____

Applicant/Permittee: _____

Project Address/Location: _____

2. CLOSURE INFORMATION:

Permittee Statement

By submitting this form I verify no further soil disturbing construction activities will occur at the above referenced location. All project soils designated in the Dust Control Permit have been permanently stabilized by the following method(s) (Check all that apply):

- ☐ Permitted area built out – no disturbed soil areas remain.
- ☐ Application of ground cover / dust palliative.
- ☐ <1/4 acre disturbed soil remains.
- ☐ Dust Control Permit #: _____ has replaced this permit for any remaining disturbed areas.

I further verify I have inspected the site for the following items, with the results indicated:

Unpaved roads or easements are remaining on or accessing the permitted site. ☐ Yes ☐ No

Unpaved areas remain on the site that could be used for parking or storage lots. ☐ Yes ☐ No

This project is subject to a **Final Closure plan** or **Public Works Agreement**. ☐ Yes ☐ No

Print Name: _____ Date: _____

Send me this form upon completion of inspection. ☐ Yes ☐ No, if yes FAX #: _____

or Email address _____

DAQ use only

Inspection Results

If this project is subject to a Final Closure Plan or PW Agreement has it been met? ☐ Yes ☐ No

If Public Works Agreement is for continued long-term DCP list #: _____

Are any unpaved roads, easements or parking/storage lots on the permitted site? ☐ Yes ☐ No

An inspection by a DAQ Enforcement Officer has been performed with the following results:

- ☐ Construction has ceased and the entire site has been adequately treated for long-term stabilization (PASS)
- ☐ Construction has ceased, but the site has not been adequately treated for long-term stabilization in certain areas (FAIL)
- ☐ Construction has ceased, but the site has not been adequately treated for long-term stabilization (FAIL)
- ☐ This project will require an ATC/OP for the following equipment: _____
- ☐ This permit replaced with permit(s) # _____

Notes: _____

Enforcement Officer: _____ Date: _____

☐ Rev by JB



CONSTRUCTION SITE DUST CONTROL MONITOR
--

Air Quality Regulation Section 94.7.5 requires a Dust Control Monitor for any construction **project** that has 50 acres or more of disturbed soils. This requirement is applicable to multiple sites that are individually permitted at less than 50 acres each, if they are adjacent to one another, under common ownership, or are within a master planned community, and together they have 50 acres or more of disturbed soil.

Permittee: _____

Project Name and Dust Control Permit Number(s):

Project Name	Permit number	Acreage
Total Acreage:		

Monitor's Name: _____

Company: _____

Dust Monitor Card #: _____ Cellular Phone #: _____

Office Phone #: _____ FAX #: _____



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Invoice Number: _____

APPLICATION FOR TRANSFER OF DUST CONTROL PERMIT
AND/OR CHANGE OF PROPERTY OWNER - MODIFICATION

Please print in ink or type. Blank spaces must be completed for the application to be processed. If not applicable, enter N/A.

(mark all that apply)

1. This application is for; ☐ Transfer of permit
☐ Change of Property Ownership

2. Permit Number: _____

Project Name: _____

3. Current Permit Holder: _____

Current Property Owner: _____

4. New Permittee (if applicable):

☐ Property Owner ☐ Developer ☐ Prime Contractor ☐ Other _____

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____ Fax: _____

E-mail Address: _____

5. New Property Owner (if applicable):

Name: _____

6. Point of Contact for dust control matters and to whom a NOTICE OF VIOLATION should be sent if necessary (if changed from current permit):

Name: _____

Company: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____ Ext: _____ Fax: _____

Cell/Pager: _____ After Hours Phone: _____

7. On-site Superintendent/Supervisor/Foreman contact (if changed from current permit):

Name: _____ Company: _____

On-site phone: _____ Cellular/Pager: _____

DAQ Dust Class Certification/Card #: _____ Expiration date: _____

Have all other on-site supervisory personnel attended the DAQ Dust Class? ☐ Yes ☐ No

If no, all required personnel must sign up for Dust Class within 7 days of permit transfer and attend within 30 days.

By signing this permit application I certify that:

The permittee accepts responsibility for assuring that all contractors, subcontractors, and all other persons on the construction site covered by this permit, comply with the terms and conditions of the permit, the dust mitigation plan and all applicable Air Quality Regulations.

By signing this application, he/she has read and understood the existing Dust Control Permit and associated documents, and agrees to abide by all conditions and requirements of that permit.

The applicant/permittee understands that it is a condition of the permit that the permittee agrees to allow the inspection of the site for compliance with the terms and conditions of the permit and Air Quality Regulations at any time during the permittee's hours of operation by a DAQ officer without prior notice or at any time pursuant to the investigation of a complaint or upon direct observation of emission and/or failure to maintain Best Management Practices.

I understand that any material misrepresentation made in this application may invalidate the permit and that Clark County may pursue enforcement action against me. In addition, I understand any willful misrepresentation may result in criminal penalties. I declare under penalty of perjury that the foregoing is true and correct

Executed on:

DATE SIGNATURE

PRINTED NAME TITLE AND COMPANY NAME

Current Permit Holder Authorization:

I authorize the transfer of the Dust Control Permit for Construction Activities listed on this application to the person listed as the New Permittee in section 4, above.

DATE SIGNATURE

PRINTED NAME TITLE AND COMPANY NAME

APPROVED BY:

DAQ Approval Date

PAYMENT INFORMATION TO BE COMPLETED BY THE APPLICANT

PAYING BY

(Please Print)

☐ CASH

☐ CHECK

CHECK # _____

NAME AND ADDRESS AS IT APPEARS ON CHECK:

Telephone #: _____

☐ CREDIT CARD

LAST FOUR DIGITS OF CREDIT CARD NUMBER: _____

EXACT NAME AS IT APPEARS ON CREDIT CARD:

FOR DAQ USE ONLY

ISSUE DATE

ISSUED BY

POS #

DATE PAID

RECEIVED BY

DAQ REVIEW: _____

DATE: _____

BLASTING APPROVAL (if applicable): _____

DATE: _____

DEMOLITION APPROVAL (if applicable): _____

DATE: _____

COMPLIANCE AREA ASSIGNMENT: _____ Hydrographic Area: _____

☐ Airport ☐ Blasting ☐ Commercial ☐ Demo-Structure ☐ Demo-Other ☐ Staging/Stockpiling
☐ Highway ☐ Schools ☐ Residential ☐ Public Works ☐ Flood Detention ☐ Utilities ☐ Misc.



Soil Analysis for Projects 50 Acres or More

To comply with Clark County Air Quality Regulation 94.5.7, projects greater than or equal to fifty (50) acres must use actual soil analysis to determine the project's soil Particulate Emission Potential (PEP). To meet this requirement the Clark County Department of Air Quality (DAQ) has divided the 32 Unified Soil Classification System (USCS) groups into eight (8) designations in the chart below, the 9 organic soils that are not native to this region are not listed.

DAQ Designation	USCS Group Symbols	USCS Group Names (Generalized)
1	CL, CL-ML, ML	Clay and/or silt with sand and/or gravel
2	CH, MH	Clay and/or silt with sand and/or gravel
3	GW, GP	Gravel with/without sand
4	GW-GM, GW-GC, GP-GM, GP-GC	Gravel with silt, sand and/or clay
5	GM, GC, GC-GM	Gravel with/without sand
6	SW, SP	Sand with/without gravel
7	SW-SM, SW-SC, SP-SM, SP-SC	Sand with/without silt, clay and/or gravel
8	SM, SC, SC-SM	Sand with/without gravel

The soil designation must be determined for each boring for the top one (1) foot using boring/exploration logs from the grading soils reports. Attach copies of all boring/exploration logs. Enter in the chart below the number of bores that were done within each DAQ designation.

For each different designation, at least one (1) bore must be analyzed for percent optimum moisture and percent silt content, using an appropriate ASTM test method from within the top one (1) foot of the bore. The chart below allows for two (2) sets of data per designation if additional tests are completed. List the data in the chart below.

Determine the actual soil PEP using either Figure 1: PEP Flowchart or Figure 2: Silt Content vs. Optimum Moisture Content in the Construction Activities Dust Control Handbook – BMP. List the soil PEP in the chart below using the following abbreviations: H=high, MH=moderate-high, ML=moderate-low and L=low.

DAQ Designation	1	2	3	4	5	6	7	8
# of bores								
% silt								
% opt. moisture								
Actual soil PEP								
% silt								
% opt. moisture								
Actual soil PEP								

Control measures selected may be different for each soil PEP determined, if not, the highest PEP identified on the project shall be used. A map showing boring locations must be attached. If the soils analysis identifies two or more soil designations, the area of each soil designation shall be shown on a map of the project.

ATTACHMENT 2

DUST SUPPRESSANT, PALLIATIVE AND SURFACTANT INFORMATION

Interim Policy On Dust Palliative Use In Clark County, Nevada

Environmental / Regulatory Requirements

General Use Requirements

Application Guidelines - Traffic Area Applications

Application Guidelines - Non-Traffic Area Applications

Glossary of Terms and Definitions

GLOSSARY OF TERMS AND DEFINITIONS¹

Application rate - For liquid suppressants, the volume of mixed solution (concentrate plus water) applied per unit area of land. Typical application rates range from 0.10 to 1.00 gallons of mixed solution per square yard (gallon/yd²) of land.

Application rate - For fibers and mulches, the mass of solids in pounds applied per unit area of land. Typical application rates range from 500 pounds per acre to 6,000 pounds per acre.

Brine - Solution of salt in water. Strength of brine measured by percent solids by mass. For example; a 40% magnesium chloride brine has 40% solids by mass.

Deliquescent salts - Calcium chloride and magnesium chloride salts are deliquescent (readily drawing moisture from the atmosphere and melting). Calcium chloride is available as flake or brine. Magnesium chloride is available as brine. Brine solids contents are variable.

Dilution ratio - The ratio of the volume of concentrate to volume of water. Example; 1:4 means 1 volume of concentrate is to be mixed with 4 volumes of water, or 100 gallons of concentrate would be mixed with 400 gallons of water.

Dust Palliative - A hygroscopic material, non-toxic chemical stabilizer or other dust palliative which is not prohibited for ground surface application by the EPA or the Nevada Division of Environmental Protection (NDEP) or any applicable law or regulation, as a treatment material for reducing fugitive dust emissions. Water, solutions of water and chemical surfactants, and foam are not dust palliatives for the purpose of these Regulations.

Dust Suppressant - Water, hygroscopic material, solution of water and chemical surfactants, foam, non-toxic chemical stabilizer or any other dust palliative which is not prohibited for ground surface application by the EPA or the Nevada Division of Environmental Protection (NDEP) or any applicable law or regulation, as a treatment material for reducing fugitive dust emissions.

Fibers/mulches - Blends of wood fiber or paper mulch with binder and or tackifier in water. Fibers and mulches are usually blended on-site. Formulation types and concentrations are often proprietary and depend on soil conditions and intended use.

Hygroscopic - Readily drawing moisture from the atmosphere but not melting. Dry sodium chloride is hygroscopic.

Lignosulfonate - By-product of sulfite paper-making process. Available as 10-25% volumetric residual solution, as a 50% volumetric residual solution, or as powdered solid to be mixed with water. May have high initial BOD (biological oxygen demand).

Organic non-petroleum products - Tall oils; Distilled product of kraft (sulfate) paper-making process. Available as a 40-50% volumetric residual concentrate to be diluted with water.

¹ Principal source: Bolander and Ymada, Dust Palliative Selection and Application Guide – US Department of Agriculture, November, 1999.

Organic non-petroleum products - Vegetable oils; typical sources include canola oil, cottonseed oil, linseed oil and soybean oil. Applied full-strength at 0.25-0.50 gallon/yd².

Organic petroleum products - Available as cutback asphalt, asphalt emulsions, modified asphalt emulsions and other emulsified oils. Application rates highly variable, depending on road surface conditions, product type and dilution.

Synthetic polymers - By-products of adhesive manufacturing process. Available as 40-50% volumetric residual concentrate (40-60% solids by mass) in water, then diluted for application.

Tackifier - A substance used with water to hold together mulches and other dust palliatives. A tackifier binds small particles together without forming a hard crust. Many dust palliatives can be used in a dilute form as a tackifier.

Topical - Liquid dust suppressant application technique using a hose, spray bay or spray cannon.

Windrow- Method of making a temporary road surface. A 4- to 6-inch thick layer of soil is scraped off the surface. The surface is treated with dust suppressant. The windrow is scraped back onto the surface and another treatment of dust suppressant is applied. A compaction step may be necessary.

ENVIRONMENTAL / REGULATORY REQUIREMENTS

Policy Background

The objective of this Interim Policy On Dust Palliative Use In Clark County is to facilitate the implementation of air quality fugitive dust controls in a manner that prevents human exposure to harmful constituents and protects soil and water resources while achieving air quality objectives. This interim policy was based on current state and federal regulations that are applicable to soil contamination, groundwater contamination, and surface water contamination. Some requirements are also incorporated based on information currently available in the scientific literature.

This policy document has been drafted to provide guidance on the use of dust palliatives and suppressants. The document lists applicable state regulations that may be applicable to the manufacture and application of dust palliatives. This interim policy includes guidelines and requirements for the use of dust palliative products based on conditions in the Las Vegas Valley.

This policy document is intended to serve as an interim policy until permanent regulations can be developed based on more complete scientific data. It is envisioned that the permanent regulations will be more comprehensive in scope.

Regulatory Basis For Interim Guidance

- NAC 445A.2272 Contamination of soil: Establishment of action levels
- NAC 445A.22735 Contamination of groundwater: Establishment of action levels
- NAC 445A. 2275 Contamination of surface water
- NRS 444.8565 "Hazardous Waste" defined
- NRS 444.861 "Used Oil" defined

- NRS 444.8632 Compliance with federal regulations adopted by reference.
- NRS 444.8682 Requirements for managing and disposing of mixtures of used oil and hazardous waste or other products
- NRS 444.8683 Regulation of mixtures of used oil with wastes determined not to be hazardous
- NRS 444.8681 Mixing of used oil with hazardous waste or products

COMPLIANCE

Application of dust palliatives may be subject to sample collection and testing for compliance with applicable regulations of the Nevada Administrative Code and the Nevada Revised Statutes, and with the prohibited materials requirements and pH requirements set forth in this interim policy. Sample collection may be conducted by enforcement staff of the Clark County Department of Air Quality & Environmental Management or the Nevada Division of Environmental Protection.

The requirements of this policy are applicable to Dust Control Permits and Dust Mitigation Plans submitted under the requirements of Section 94 of the Air Quality Regulations. These requirements are also applicable where soil surface stabilization is performed to comply with a Corrective Action Order issued under Sections 90, 91, 92, and 93 of the Air Quality Regulations.

Prohibited Materials

The materials and compounds listed on the following pages are not permitted in any dust suppressant product at detectable levels:

1) Banned Pesticides:²

- aldrin
- chlordane
- DDT
- DDE
- DDD
- Methoxychlor
- Dieldrin/endrin
- Heptachlor
- Hexachlorobenzene

² **References:** a) United States Environmental Protection Agency
Office of Pesticide Programs

<http://www.epa.gov/oppfead1/international/piclist.htm>

b) The Merck Index, eleventh edition, Merck and company, Rahway, N. J., 1989

c) Environmental Chemistry, Manahan, S. Lewis Publisher, 1994.

d) Hazardous Wastes, Watts, R. Wiley Interscience, 1997.

e) Hazardous Waste Management, La Grega, M. McGraw Hill, 1994.

- Lindane ((γ -BHC)
- 4. 2,3,4,5-Bis(2-butylene)tetrahydro-2- furaldehyde (Repellent-11)
- bromoxynil butyrate
- cadmium compounds
- calcium arsenate
- carbon tetrachloride
- chloranil
- chlordecone (kepone)
- chlorinated camphene [Toxaphene]
- chloromethoxypropylmercuric acetate (CPMA)
- copper arsenate
- DBCP
- Di(phenylmercury)dodecenylsuccinate (PMDS)
- EPN
- ethyl hexyleneglycol (6-12)
- lead arsenate
- leptophos
- mevinphos
- mirex
- nitrofen (TOK)
- OMPA (octamethylpyrophosphoramide)
- phenylmercury acetate (PMA)
- phenylmercuric oleate (PMO)
- potassium 2,4,5-trichlorophenate (2,4,5-TCP)
- pyriminil (Vacor)
- safrole
- silvex
- sodium arsenite
- TDE
- Terpene polychlorinates (Strobane)
- thallium sulfate
- vinyl chloride

2) **Severely Restricted Pesticides**³

- arsenic trioxide
- carbofuran (granular only)
- daminozide/alar

³ **References: a) United States Environmental Protection Agency**

Office of Pesticide Programs

<http://www.epa.gov/oppfead1/international/piclist.htm>

b) The Merck Index, eleventh edition, Merck and company, Rahway, N. J., 1989

c) Environmental Chemistry, Manahan, S. Lewis Publisher, 1994.

d) Hazardous Wastes, Watts, R. Wiley Interscience, 1997.

e) Hazardous Waste Management, La Grega, M. McGraw Hill, 1994.

- sodium arsenate
- tributyltin compounds

3) Dioxins

4) Asbestos

5) PCBs

pH Limits

All dust suppressant products shall have a pH value of not less than four (pH = 4) or greater than nine (pH = 9) as applied.

GENERAL USE REQUIREMENTS

Open Bodies of Water and Drinking Water Well-Heads:

Organic petroleum products, deliquescent/hygroscopic salts, and lignin-based palliatives may not be used within twenty (20) yards of open bodies of water, including lakes, streams, and canals, within twenty (20) yards of a drinking water well-head. This buffer zone is intended to prevent leachate from these palliatives from reaching an open body of water or a ground water aquifer.

Natural Washes and Flood Control Channels:

Organic petroleum products, deliquescent/hygroscopic salts, and lignin-based palliatives may not be used within twenty (20) yards of any natural wash or flood control channel. This buffer zone is intended to prevent leachate from these palliatives from reaching a natural wash or flood channel, and subsequently being flushed into surface waters or drinking water supplies during a rain event

Surfactants:

Surfactants may not contain phosphates. Surfactants by themselves are not allowed for use as a dust palliative because they do not form a durable soil surface. Non-phosphate surfactants may be combined with dust palliatives to assist penetration of dust palliatives into hydrophobic soils.

Pesticide Application With Dust Palliatives:

Any person who applies any pesticide material with a dust palliative is required to hold a valid pesticide applicators license issued by the State of Nevada.

Dust Palliative Dilution and Tank Cleaning:

Dust palliative applicators should be aware that use of water tainted with any of the above-listed prohibited or severely restricted chemicals, or with other compounds that would result in a violation of applicable codes and regulations for the dilution of dust palliatives could result in a palliative mixture that would not comply with applicable

environmental regulations or the *pH* requirements for dust palliatives set forth in this policy.

Only potable water supplies or reclaimed water, meaning wastewater that, as a result of appropriate treatment, is suitable for subsequent beneficial use, may be used as a diluent for dust suppressants. Application or transport tanks that have been used for other purposes, such as pesticide use, must be cleaned in accordance with applicable regulations before being used to transport, mix, or apply a dust palliative.

Traffic Area Applications:

1. Fiber mulch products are not allowed for use as a dust palliative in traffic areas. These products do not hold up well for traffic use.
2. Non-phosphate surfactants may be combined with dust palliatives to assist penetration of into hydrophobic soils. Surfactants by themselves are not allowed for use as a dust palliative because they do not form a durable soil surface. Surfactants may not contain phosphates because phosphates adversely impact water quality.
3. Use of deliquescent/hygroscopic salts are limited to magnesium chloride and only allowed for short-term (less than one year) stabilization of unpaved roads. Treated unpaved roads must be periodically maintained with additional applications of water and magnesium chloride as needed to maintain effectiveness. Magnesium chloride is not effective, even with product reapplication, for periods of more than one year. Magnesium chloride may not be used on trafficked areas within twenty (20) yards of an open body of water, a drinking water well-head, natural or artificial drainage channel, or other surface water feature.

TABLE 1
TRAFFIC AREA APPLICATION REQUIREMENTS
Appropriate Use of Liquid Dust Palliatives and Application Rates

(Traffic Area: Any land area upon which vehicular traffic is reasonably expected to occur due to location, topography or access)

Dust palliative materials must conform to all applicable Environmental / Regulatory Policies and General Use Requirements

Product Type	Use/Treatment	Dilution Ratio Range Typical	Application Rate gallon/yd2	Notes
Synthetic polymers: polyvinyl acetate vinyl acrylic	Topical Road or parking lot Topical Road shoulder Windrow Road surfaces	1:12-1:4 1:9 1:12-1:4 1:9 1:12-1:4 1:9	0.50 0.50 0.25/0.25/0.50	1,2,3,4
Organic petroleum products: modified & unmodified asphalt emulsions	Topical Road or parking lot Topical Road shoulder Windrow Road surfaces	1:8 1:4 1:10 1:7 1:8 1:4	0.50 0.25 0.40	1,2,3,4,5 1,2,3,4,5 1,2,3,4,5
Magnesium chloride only. Other deliquescent/ hygroscopic salts, including calcium chloride and sodium chloride are not permitted	Topical Road or parking lot Topical Road shoulder-not Allowed Windrow Road surfaces		0.50 0.25/0.25	1,2,3,4,6,8,9 1,2,3,4,6,8,9, 10 1,2,3,4,6,8,9
Fibers/Mulches	Not Allowed Unpaved Road and other Traffic Applications	Not Applicable	Not Applicable	12
Lignin-Based Types (Lignosulfonate)	Topical Road or parking lot Topical Road shoulder Windrow Road surfaces	1:1 1:1 1:7-1:4 1:4 1:1 1:1	0.50 to 1.00 0.15 to 0.20 0.25/0.25 to 50/0.50	1,2,3,4,5 1,2,3,4,5 1,2,3,4,5
Organic non- petroleum products: animal fats, molasses/sugar beet, tall oil emulsions, vegetable oils	Topical Road or parking lot Topical Road shoulder Windrow Road surfaces	1:10 -1:2 1:5 1:10 -1:2 1:5 1:2- 1:1 1:1	1.00 1.00 0.15/0.15	1,2,3,4,5 1,2,3,4,5 1,2,3,4,5
Other	As approved by Control Officer			

Non-Traffic Area Applications:

1. Organic petroleum products, including modified and unmodified asphalt emulsions, are not permitted on non-traffic areas. These palliatives are subject to NAC 445A.2272(b) and may discolor the land surface and produce unpleasant odors.
2. Deliquescent/hygroscopic salts are not allowed for non-traffic stabilization. These salts require frequent re-watering to be effective in the Las Vegas Valley, are not effective for periods of more than one year, and tend to leach chlorides when precipitation occurs.
3. Lignin-based palliatives are not allowed for non-traffic stabilization. Surface binding action of lignin-based palliatives may be reduced or completely destroyed when heavy rains occur. The decreased binding action of these products following heavy rains renders areas treated with lignin-based palliatives vulnerable to wind erosion after rain occurs. Leachate from lignin-based palliatives may also adversely impact the quality of storm water runoff.
4. Non-phosphate surfactants may be combined with dust palliatives to assist penetration of into hydrophobic soils. Surfactants by themselves are not allowed for use as a dust palliative because they do not form a durable soil surface. Surfactants may not contain phosphates because phosphates adversely impact water quality.

TABLE 2
NON-TRAFFIC AREA APPLICATION REQUIREMENTS
Appropriate Use of Liquid Dust Palliatives and Application Rates

(Non-Traffic Area: Any land area upon which no vehicular traffic is reasonably expected to occur due to site specific conditions; e.g., remoteness, fencing or other access controls)

**Dust palliative materials must conform to all applicable Environmental /
Regulatory Requirements and General Use Requirements.**

Product Type	Use/Treatment	Dilution Ratio Range Typical	Application Rate gallon/yd ²	Notes
Synthetic polymers: Polyvinyl acetate Vinyl acrylic	Topical Vacant Land	1:12-1:4 1:9	0.50	1,2,3,4
Organic petroleum products: modified & unmodified Asphalt emulsions	Not Allowed Vacant Land	Not Applicable	Not Applicable	10
Deliquescent/ Hygroscopic salts: Magnesium chloride Brine, calcium chloride brine or flakes, sodium chloride	Not Allowed Vacant Land	Not Applicable	Not Applicable	10
Lignin-Based Types (Lignosulfonate)	Not Allowed Vacant Land	Not Applicable	Not Applicable	10
Fibers/Mulches	Topical Vacant Land	As prepared	500-6000	1,2,3,4,11
Organic non- petroleum products: animal fats, molasses/sugar beet, tall oil emulsions, vegetable oils	Topical Vacant Land	1:10-1:2 1:5	1.00	1,2,3,4,5
Other	As approved by Control Officer			

NOTES: (See last column in preceding Application Guideline tables)

1. Topical application rates shown are to obtain ½ to 1 inch of penetration. Higher application rates should be used if greater penetration is needed. Windrow rate shown is to give sufficient penetration to from a 4-6 inch thick temporary travel surface.
2. The dilution ratio (concentrate: water) is variable, and shall be appropriate for the intended use, and local soil and weather conditions, as proposed by the Contractor and agreed upon by the Control Officer. Warranty conditions in Note 4 apply,'
3. Application rate of mixed solution at the typical dilution ratio. Lifetime conditions in Note 4 apply. For windrow applications, the rates separated by slash marks indicate the first/second/third application. First application is after removal of windrow. Second application is after replacement of windrow. Third application, if needed, is after second application.
4. Application of diluted suppressant shall be sufficient to achieve a minimum warranted lifetime of one year from date of application.
5. These palliatives are subject to NAC 445A.2272(b) and may discolor the land surface and produce unpleasant odors.
6. Must be periodically maintained with additional applications of water and salt as needed to maintain effectiveness. Allowed only for short-term (< 1 year) stabilization of unpaved roads. May not be used on trafficked areas within twenty (20) yards of a drinking water well-head, natural or artificial drainage channel or other surface water feature unless approved by the Control Officer.
7. Surfactants may be added to assist penetration of water and dust palliative into hydrophobic soils. Surfactants by themselves are not allowed for use as dust palliatives. Phosphates not allowed as surfactant constituents.
8. Brine strength may vary as supplied from manufacturer, but is typically in the range of 20-40% solids by mass. Maximum and minimum allowable strengths to be set by the Control Officer.
9. Sodium chloride (NaCl) not allowed for any application, because it is ineffective at ambient relative humidity below 76%. Relative humidity above 50% seldom occurs in the Las Vegas Valley.
10. Deliquescent/hygroscopic salts are not allowed for use on vacant lands or on road shoulders near surface waters or surface drainage because of adverse water quality impacts, including elevated chloride concentrations in storm water runoff and in groundwater.
11. Application rate in pounds per acre at the on-site blended strength.
12. Fiber mulches are not effective for traffic applications.

ATTACHMENT 3

CALIFORNIA AIR RESOURCES BOARD (CARB) - APPROVED ABRASIVES INFORMATION

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER G-11-118

Relating to Certification of Abrasives for Permissible Outdoor Blasting under
California Code of Regulations, Title 17, Section 92530

WHEREAS, pursuant to California Health and Safety Code section 40901 and following, the Air Resources Board (ARB) has adopted abrasive blasting standards;

WHEREAS, in title 17 California Code of Regulations, section 92000 and following, ARB has established abrasive blasting standards;

WHEREAS, title 17 Cal. Code Regs., section 92500 (c), provides in part that any abrasive blasting operation conducted outside a permanent building must use exclusively wet abrasive blasting, hydroblasting, vacuum blasting, or abrasives certified by ARB for permissible dry outdoor blasting;

WHEREAS, Exhibit A to this executive order lists abrasives that have been tested in accordance with "Method of Test for Abrasive Media Evaluation," Test Method No. California 371-A, dated May 15, 1975, including the "Visible Emission Evaluation Test Method for Selected Abrasives Used in Permissible Dry Outdoor Blasting," as adopted by ARB on April 1, 1991, for some selected abrasives, and all have been found to comply with the abrasive certification performance standards set forth in title 17 Cal. Code Regs., section 92530 (b);

WHEREAS, Exhibit A may be amended periodically to remove abrasives no longer certified for use and to add new abrasives that have been tested and found to comply with the abrasive certification performance standards set forth in title 17 Cal. Code Regs., section 92530 (b); and

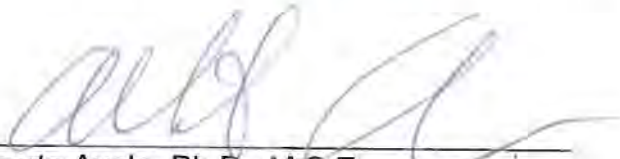
WHEREAS, ARB's Executive Officer, pursuant to California Health and Safety Code section 39516, issued Executive Order G-02-007 delegating to the Chief of ARB's Monitoring and Laboratory Division the authority to certify abrasives in accordance with title 17 Cal. Code Regs., section 92530(a).

NOW, THEREFORE, I, Alberto Ayala, Chief of ARB's Monitoring and Laboratory Division, order certified the abrasives listed in Exhibit A for permissible dry outdoor blasting pursuant to title 17 Cal. Code Regs., section 92530.

IT IS FURTHER ORDERED, pursuant to title 17 Cal. Code Regs., section 92530 (a), that the certifications granted by this executive order will expire on the respective dates listed in Exhibit A and subsequent addenda, and thereafter no previously listed abrasive will be permissible for dry outdoor blasting until recertified in accordance with title 17 Cal. Code Regs., section 92530.

IT IS FURTHER ORDERED that Executive Order G-11-075 is superseded by this order.

Executed at Sacramento, California, this 10th day of February 2012.


Alberto Ayala, Ph.D., M.S.E.
Chief, Monitoring and Laboratory Division

Attachment

Exhibit A: Abrasives Certified for Permissible Dry Outdoor Blasting

EXECUTIVE ORDER G-11-118

STATE OF CALIFORNIA
AIR RESOURCES BOARD

ABRASIVES CERTIFIED FOR PERMISSIBLE DRY OUTDOOR BLASTING pursuant to California Code of Regulations, title 17, section 92530 Unless otherwise noted, the cut-point for fineness (cpff) is #70 sieve.

Abrasive Technologies, Inc.

499 Settlers Ridge Parkway
Woodbury, Minnesota 55129

www.ati-blackdiamond.com

Albie Kraemer
(651) 436-6071
Fax: (651) 436-6744

Plant: 499 Settlers Ridge Parkway
Woodbury, Minnesota

Brand Name or Grade:

Black Diamond Grit 20/40
Black Diamond Grit 30/60
Black Diamond Grit 12/30
Wicked Sister
Little Fury
Black Piranha

Expires:

8/13/13
8/13/13
8/13/13
8/13/13
8/13/13
8/13/13

Abrasives, Incorporated

4090 Highway 49
Glen Ullin, North Dakota 58631

www.abrasivesinc.com

Russell Raad
(701) 348-3610
Fax: (701) 348-3615
marketing@abrasivesinc.com

Plant: 4090 Highway 49
Glen Ullin, North Dakota

Brand Name or Grade:

Black Magic 8-20
Black Magic 16-40
Black Magic 20-40
Black Magic 40-60

Expires:

8/31/12
8/31/12
8/31/12
8/31/12

Arden Incorporated DBA
Green Diamond Sands Products

Post Office Box D
Riddle, Oregon 97469

Brian Rebuck
(541) 874-3111x18
Fax: (541) 874-3113
brebuck@greendiamondsand.com

Plant: Corner of 6th and E Street
Riddle, Oregon

Brand Name or Grade:
Green Diamond 1636
Green Diamond 2050

Expires:
8/31/12
8/31/12

Barton Mines Company, L.L.C.

Six Warren Street
Glens Falls, New York 12801

www.barton.com
Scott Trom
(800) 741-7756
Fax: (518) 798-5728
strom@barton.com

Plant: 17-C Keeraikarantattu
Tisiayanvilai, Tamil Nadu
India

Brand Name or Grade:
Barton Garnet #36
Barton Garnet #30x40
Barton Garnet #80
(cpff=#100)

Expires:
8/31/12
8/31/12
8/31/12

Plant: Hudson River Plant Rd.
North River, NY

Brand Name or Grade:
Barton Garnet #36 CG
Barton Garnet #50 HPX
Barton Garnet #80HPX
(cpff=#200)
Barton Garnet #120HPX
(cpff=#270)

Expires:
8/31/12
8/31/12
8/31/12

8/31/12

Plant: 1960 Diamond Hill Rd.
Chesapeake, VA

Brand Name or Grade:
Barton Garnet #30x60 Plus
(cpff=#100)

Expires:
8/31/12

Barton Mines Company, L.L.C. con't

Barton Mines Company, L.L.C. con't

Six Warren Street
Glens Falls, New York 12801

www.barton.com

Scott Trom
(800) 741-7756
Fax: (518) 798-5728
strom@barton.com

Plant: South Gould Road
South of Geraldton
Western Australia

Brand Name or Grade:

GMA 80 Mesh Garnet
(cpff=#140)
GMA 30x60 Garnet
(cpff=#100)

Expires:

8/31/13

8/31/13

BCJ Sand & Rock, Incorporated

3388 Regional Park Way, Suite A
Santa Rosa, California 95403

www.bcjunlimited.com

Brad Slender
(707) 544-0303
Fax: (707) 544-8274
bcj_brad@pacbell.net

Plant: 4970 Slickens Road
Oroville, California

Brand Name or Grade:

BCJ #30
BCJ Unlimited – Sand Blasting Sand / Blasting Sand
#30 Blasting Sand
Blasting Sand
30x50 Blasting Sand
20x30 Blasting Sand
Premium Blasting Sand

Expires:

8/31/12

8/31/12

8/31/12

8/31/12

8/31/12

8/31/12

8/31/12

Bell & MacKenzie Co., Ltd.

Post Office Box 844, LCD #1
Hamilton, Ontario L8N 3N9
Canada

Richard Bell
(888) 794-5665
Fax: (888) 794-7263
rick@bellandmackenzie.com

Plant: 500 Sherman Avenue, North
Hamilton, Ontario
Canada

Brand Name or Grade:

Black Shot II Granulated Slag #12
Black Shot II Granulated Slag #20
Black Shot II Granulated Slag #40

Expires:

8/31/13

8/31/13

8/31/13

California Silica Products LLC

P.O. Box 4225
Ontario, California 91761

Randall Humphreys
(909) 938-6505
Fax: (909) 947-7929
loveferrais@aol.com

Plant: 12808 Rancho Road
Adelanto, California

Brand Name or Grade:**Expires:**

#16 Blast off Sand	8/31/13
#20 Blast off Sand	8/31/13
#30 Blast off Sand	8/31/13
CalSilica # 16	8/31/13
CalSilica #20	8/31/13
CalSilica #30	8/31/13

Carmeuse Industrial Sands

Post Office Box 249
San Juan Capistrano, California 92693

Michael Michlette
(951) 440-0913
Fax: (949) 728-0321
michael.miclette@carmeusena.com

Plant: 31302 Ortega Highway
San Juan Capistrano, California

Brand Name or Grade:**Expires:**

Dust Net #12	8/31/12
Dust Net #16	8/31/12
Dust Net #20	8/31/12
Dust Net #30	8/31/12

Cemex USA

Post Office Box 337
Marina, California 93933

Dale Kendall
(831) 883-3709
Fax: (831) 883-3703
dalew.kendall@cemex.com

Plant: Lapis Road
Two miles north of Marina, California

Brand Name or Grade:

Lapis Lustre, No. 3
Lapis Lustre, No. 0/30
Lapis Lustre, No. 1/20
Lapis Lustre, No. 1C
Lapis Lustre, No. 2/12
Lapis Lustre, No. 2/16

Expires:

8/31/12
8/31/12
8/31/12
8/31/12
8/31/12
8/31/12

Disneyland Resort

Environmental Affairs Department
TDA 219N
1313 South Have Boulevard
Anaheim, California 92802

<http://disneyland.disney.go.com/>

Frank Dela Vara
(714) 781-4344
Fax: (714) 781-3564
frank.dela.vara@disney.com

Plant: 1313 South Harbor Boulevard
Anaheim, California

Brand Name or Grade:

CO₂ Dry Ice

Expires:

8/31/13

E. I. DuPont de Nemours and Company

4641 County Road 230
Starke, Florida 32091

www.titanium.dupont.com

Luther B. Carter
(904) 276-6239
Fax: (904) 276-9329
luther.b.carter-1@usa.dupont.com

Plant: 4641 County Road 230
Starke, Florida

Brand Name or Grade:

Starblast[®]
(cpff=#200)
Starblast[®] XL
(cpff=#200)

Expires:

8/31/13

8/31/13

Energized Substation Maintenance, Incorporated

Post Office Box 2345
Apple Valley, California 92307

www.esminc.info

Ronald R. Goss
(800) 959-5589
Fax: (760) 247-2915
esm1@aol.com

Plant: Mt. Pulaski Products
908 North Vine
Mt Pulaski, Illinois

Brand Name or Grade:

#3 (20/40) Processed Corn Cobs
#3 Processed Corn Cobs
(20/40) Processed Corn Cobs

Expires:

8/31/13
8/31/13
8/31/13

Environmental Abrasives, LLC

4301 Federal Way
Boise, Idaho 83716

www.enviroabrasives.com

Todd Cantrell
(208) 947-1351
Fax: (208) 336-5706
todd@enviroabrasives.com

Plant: 505 E. Amity
Boise, Idaho

Brand Name or Grade:

16 Grit White Lightning
24 Grit White Lightning
36 Grit White Lightning
46 Grit White Lightning

Expires:

8/31/13
8/31/13
8/31/13
8/31/13

Glass Processing Solutions, LLC

493 State Route 28
Richfield Springs, New York 13439

www.andelaproducts.com

Brett Wilhelm
(315) 858-0055x231
Fax: 315-858-2669
bwilhelm@glassprocessingsolutions.com

Plant: 493 State Route 28
Richfield Springs, New York

Brand Name or Grade:

SunBlast Extra-Coarse
SunBlast Medium
SunBlast Fine
(cpff=#100)

Expires:

8/31/12
8/31/12
8/31/12

Gordon Sand Company

28310 Industrial Boulevard, Suite F
Hayward, CA 94545

George E. Gordon III
georgell@gordonsand.com
Chari P. Borja
chari@gordonsand.com
(510) 782-5640
Fax: (510) 782-5694

Plant: West End of Main Street
Guadalupe, CA 93434

Brand Name or Grade:

Golden Flint G-16*
Golden Flint G-20*
Golden Flint G-30*

Expires:

8/31/13
8/31/13
8/31/13

Harsco Minerals

5000 Ritter Road
Mechanicsburg, Pennsylvania 17055

www.reedmin.com

Anthony J. Budzinski
(717) 506-7157
Fax: (717) 506-7154
bbudzinski@harsco.com

Plant: 240 Baldwin Road
Satsuma, Alabama

Brand Name or Grade:

Black Beauty – Medium
Black Beauty - Fine

Expires:

8/31/13
8/31/13

Plant: 600 - 800 Outer Drive
LaCygne, Kansas

Brand Name or Grade:

Black Beauty – Medium
Black Beauty - Fine

Expires:

8/31/12
8/31/12

Plant: 9001 State Route 176 East
Drakesboro, Kentucky

Brand Name or Grade:

Black Beauty – Medium
Black Beauty - Fine

Expires:

8/31/12
8/31/12

Harsco Minerals con't

Harsco Minerals con't
5000 Ritter Road
Mechanicsburg, Pennsylvania 17055

www.reedmin.com
Anthony J. Budzinski
(717) 506-7157
Fax: (717) 506-7154
bbudzinski@harsco.com

Plant: Highway 104, Across from Kinkaid Power Station
Pawnee, Illinois

Brand Name or Grade:
Black Beauty – Medium
Black Beauty - Fine

Expires:
8/31/12
8/31/12

Plant: 7100 West 9th Ave.
Gary, Indiana

Brand Name or Grade:
Black Beauty – Medium
Black Beauty - Fine

Expires:
8/31/12
8/31/12

Plant: 2170 Plant Road
Memphis, Tennessee

Brand Name or Grade:
Black Beauty – Medium
Black Beauty - Fine

Expires:
8/31/13
8/31/13

Plant: 13040-A Market Street
Houston, Texas

Brand Name or Grade:
Black Beauty – Medium
Black Beauty - Fine

Expires:
8/31/12
8/31/12

Plant: Rt 2 South
Moundsville, West Virginia

Brand Name or Grade:
Black Beauty – Medium
Black Beauty - Fine

Expires:
8/31/13
8/31/13

Industrial Mineral Company

Post Office Box No. 6
Muthiahpuram, Tuticorin 628 005
India

www.supremegarnet.com

Madhavan.K
0091-461-2357221
Fax: 0091-461-2357223
supremegarnet@dataone.in

Plant: Avudaiyalpuram
Vijayapathi Village
Radhapuram Taluk
Tirunelveli District
India

Brand Name or Grade:**Expires:**

Garnet Abrasive Grit A (Mesh 12-25)	8/31/12
Supreme Garnet Grade A (Mesh 12-25)	8/31/12
Garnet Abrasive Grit Mesh B (20-40)	8/31/12
Supreme Garnet Grade B (Mesh 20-40)	8/31/12
Garnet Abrasive Grit C (Mesh 30-60)	8/31/12
Supreme Garnet Grade C (Mesh 30-60)	8/31/12

International Materials & Supplies Incorporated

56, Industrial Park Road
Keeseville, New York 12944

www.optaminerals.com

Martin Caouette
(800) 252-9288
Fax: (800) 728-9649
mcaouette@optaminerals.com

Plant: 56, Industrial Park Road
Keeseville, New York

Brand Name or Grade:**Expires:**

International Garnet #16	8/31/13
International Garnet #30-60	8/31/13

Kleen Blast Division – CanAm Minerals

50 Oak Court #210
Danville, California 94526

www.kleenblast.com

Fionn O'Neill
(925) 831-9800
Fax: (925) 831-9183
fionn@kleenblast.com

Plant: Pacific Abrasives & Supply, Incorporated
2465 Carson Road
Grand Forks, British Columbia
Canada

Brand Name or Grade:

Kleen Blast #16/30
Kleen Blast #35
Kleen Blast #30/60

Expires:

8/31/12
8/31/12
8/31/12

Plant: 676-B Moss Street
Chula Vista, California

Brand Name or Grade:

Kleen Blast #16-30 15% Blastox
Kleen Blast #35 15% Blastox

Expires:

8/31/13
8/31/13

Les Sables Olimag, Incorporated

163, rue PIE XI Street, C.P.276
Thetford Mines, Quebec G6G 5T1
Canada

www.olimag.com

Jean Yves Angers
(418) 338-3562
Fax: (418) 338-9100
jy.angers@olimag.com

Plant: 725 Boul Caouette C.P. 276
Thetford Mines, Quebec
Canada

Brand Name or Grade:

Jetmag 30-60

Expires:

8/31/12

LVH Industries, Incorporated

220 South Hancock Street
McAdoo, Pennsylvania 18237

www.lvhindustriesinc.com

Lori A. VanHoekelen
(570) 366-0950
Fax: (570) 366-0948

Plant: 49 Pinedale Industrial Road
Orwigsburg, Pennsylvania

Brand Name or Grade:

Medium
Coarse

Expires:

8/31/12
8/31/12

Minerals Research & Recovery, Incorporated

4620 South Coach Drive
Tucson, Arizona 85714

www.mrrinc.com

Michael D. Vick
(520) 748-9362
Fax: (520) 748-9364
mikev@mrrinc.com

Plant: 1/8 mile from Fire Station
North Side of Highway 85
South of Ajo, Arizona

Brand Name or Grade:

Sharpshot 12x30
Sharpshot 20x50
Sharpshot 30x60

Expires:

8/31/12
8/31/12
8/31/12

Mohawk Garnet Incorporated

808 Highway 17 East
Wahnapitae, Ontario P0M 3C0
Canada

www.mohawkgarnet.com

Bob McMurdy
(705) 694-5783
Fax: (705) 694-5575
admin@mohawkgarnet.com

Plant: Street Township (unorganized township)
Off Kukagami Road
City of Greater Sudbury, Ontario
Canada

Brand Name or Grade:

Mohawk Garnet XB16
Mohawk Garnet XB30

Expires:

8/31/12
8/31/12

Nevada Slag, Inc.

P.O. Box 1314
McGill, Nevada 89318

Meloney Roberts
(775) 235-7500
Fax: (775) 235-7119
Email: nevadaslag@att.net

Plant: 55 North 4th Street
McGill, Nevada

Brand Name or Grade:

Nevada Black 8/20
Nevada Black 16/30
Nevada Black 30/60

Expires:

8/31/13
8/31/13
8/31/13

Opta Minerals, Inc.

407 Parkside Drive
Watertown, Ontario L0R 2H0
Canada

www.optaminerals.com

John Papaioannou
(905) 689-6661x335
Fax: (905) 689-3915
johnp@optaminerals.com

Plant: 407 Parkside Drive
Watertown, Ontario
Canada

Brand Name or Grade:
Ebony Grit 14

Expires:
8/31/12

P.W. Gillibrand

4537 Ish Drive
Simi Valley, California 93063

Gary Shockley
(805) 520-8731x416
Fax: (805) 520-0968
gary@pwgcoinc.com

Plant: 5810 Bennett Road
Simi Valley, California

Brand Name or Grade:
Silver Sand #12
Silver Sand #16
Silver Sand #20
Silver Sand #30

Expires:
8/31/12
8/31/12
8/31/12
8/31/12

Servicios Mineros del Noroeste S.A. de C.V.

Reform 1507-A
Col Nueva
Mexicali, BC 91100
Mexico

Robert Mark Anthony
52-686-548-7654
FAX: 52-686-551-9824
rma06@hotmail.com

Plant: Col Mariana
GPE Victoria, BC
Mexico

Brand Name or Grade:
Almandite Garnet 36
Dark Red 20/30
Red 30/40
Almandite Garnet
Select Garnet
Kleen Blast Select Garnet

Expires:
8/31/12
8/31/12
8/31/12
8/31/12
8/31/12
8/31/12

Sierra Silica Resources

650 Georgia Pacific Way
Oroville, California 95966

www.sierrasilica.com

Travis Hoiseth
(916) 214-6885
Fax: (530) 534-9564
Travish@sierrasilica.com

Plant: 650 Georgia Pacific Way
Oroville, California

Brand Name or Grade:
Sierra Silica #30

Expires:
8/31/13

Silica Resources Incorporated

4553 Hammonton Road
Marysville, California 95901

www.sri-sand.com

Dustin Parsons
(530) 741-0290
Fax: (530) 741-3457
Steve@sri-sand.com

Plant: 4553 Hammonton Road
Marysville, California

Brand Name or Grade:
SRI Supreme #12
SRI Supreme #20
SRI Supreme #30

Expires:
8/31/12
8/31/12
8/31/12

Sponge-Jet, Inc.

14 Patterson Lane
Newington, New Hampshire 03801

www.spongejet.com

Mr. William F. McLaughlin, Jr.
(603) 610-7950
Fax: (603) 431-6043
Email: bmclaughlin@spongejet.com

Plant: 1230 Bare Valley Rd.
Montrose, Pennsylvania

Brand Name or Grade:
Sponge-Jet Silver 16
Sponge-Jet Silver 30
Sponge-Jet Silver 60
Sponge-Jet Silver 80
Sponge-Jet Silver 120
Sponge-Jet Silver 320

Expires:
8/31/2013
8/31/2013
8/31/2013
8/31/2013
8/31/2013
8/31/2013

Strategic Materials, Incorporated

2323 West 3rd Street
Cleveland, Ohio 44113

www.strategicmaterials.com

Scott Wightman
(216) 771-8274
Fax: (216) 241-4453
swightman@strategicmaterials.com

Plant: 7000 Bandini
Commerce, CA

Brand Name or Grade:

BriteBlast Course
BriteBlast Medium
New Age Media® Course
New Age Media® Medium
Green Blast® Course
Green Blast® Medium
Eco Blast™ Course
Eco Blast™ Medium
GlassBlast Course
GlassBlast Medium

Expires:

8/31/2013
8/31/2013
8/31/2013
8/31/2013
8/31/2013
8/31/2013
8/31/2013
8/31/2013
8/31/2013
8/31/2013

Plant: 1932 Fairway Dr.
San Leandro, CA

Brand Name or Grade:

BriteBlast Course
BriteBlast Medium
New Age Media® Course
New Age Media® Medium
Green Blast® Course
Green Blast® Medium
Eco Blast™ Course
Eco Blast™ Medium
GlassBlast Course
GlassBlast Medium

Expires:

8/31/2013
8/31/2013
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8/31/2013
8/31/2013

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2323 West 3rd Street
Cleveland, Ohio 44113

www.strategicmaterials.com
Scott Wightman
(216) 771-8274
Fax: (216) 241-4453
swightman@strategicmaterials.com

Plant: 825 South West Loop
Houston, TX

Brand Name or Grade:

BriteBlast #1 Coarse
BriteBlast #2 Fast
New Age Media® #1 Coarse
New Age Media® #2 Fast
Green Blast® #1 Coarse
Green Blast® #2 Fast
Eco Blast™ #1 Coarse
Eco Blast™ #2 Fast
GlassBlast #1 Coarse
GlassBlast #2 Fast

Expires:

8/31/2013
8/31/2013
8/31/2013
8/31/2013
8/31/2013
8/31/2013
8/31/2013
8/31/2013
8/31/2013
8/31/2013

Teichert Aggregates

8760 Kiefer Boulevard
Sacramento, California 95826

www.teichert.com

Ron Stickel
(916) 484-3363
Fax: (916) 484-7012
Email: rstickel@teichert.com

Plant: 8760 Kiefer Blvd.
Sacramento, California

Brand Name or Grade:

Black Talon
(cpff=#140)

Expires:

8/31/12

TriVistro Corporation

18420 – 68th Avenue South, #101
Kent, Washington 98032

www.trivistro.com

Christopher H. Freas
(425) 251-8340
Fax: (425) 251-8301
Email: cfreas@trivistro.com

Plant: 18420 – 68th Avenue South
Kent, Washington

Brand Name or Grade:

Vitro Grit VG #16/30
Vitro Grit VG #30/50

Expires:

8/31/13
8/31/13

U.S. Minerals, Incorporated

2105 North Winds Drive
Dyer, Indiana 46311

www.us-minerals.com

Vincent J. Piccirilli
(219) 864-0909x18
Fax: (219) 864-4675
vpiccirilli@us-minerals.com

Plant: 3860 Peters Road
Harvey, Louisiana

Brand Name or Grade:
Black Magnum

Expires:
8/31/12

Virginia Materials Incorporated,
An Optaminerals Company

407 Parkside Drive
Watertown, Ontario L0R 2H0
Canada

www.optaminerals.com

John Papaioannou
(905) 689-6661x335
Fax: (905) 689-3915
johnp@optaminerals.com

Plant: 3306 Peterson Street
Norfolk, Virginia

Brand Name or Grade:
Indian Garnet
Black Blast
Admirals Garnet
(cpff=#140)

Expires:
8/31/12
8/31/12
8/31/12

V. V. Mineral

Ittamozhi Road
Keeraikaranthattu
Tisaiyanvilai- 627 657
Tamilnadu
India

www.vvmineral.com

00-91-4637-272360
Fax: 00-91-4637-271802
Fax: 00-91-4637-271802

Plant: No.1, M.L.Theri Road
Keeraikaranthattu
Tisaiyanvilai-627 657
Tirunelveli District
Tamilnadu
India

Brand Name or Grade:
Garnet Abrasive Grit Grade-B (20-40 mesh)
Sg. Super Garnet Grade-B (20-40 mesh)

Expires:
8/31/12
8/31/12

V. V. Mineral con't

V. V. Mineral con't
Ittamozhi Road
Keeraikarantattu
Tisaiyanvilai- 627 657
Tamilnadu
India

www.vvmineral.com

00-91-4637-272360
Fax: 00-91-4637-271802
Fax: 00-91-4637-271802

Plant: No.75,K.Pudur Village
Vallanvilai,Navalady post
Tirunelveli District
Tamilnadu
India

Brand Name or Grade:

Garnet Abrasive Grit Grade-C (30-60 mesh)
Sg. Super Garnet Grade-C (30-60 mesh)

Expires:

8/31/12
8/31/12

WGI Heavy Minerals Inc.

P. O. Box 190
Fernwood, Idaho 83830

www.wgiheavyminerals.com

Sandy Stamper
(208) 245-2096
Fax: (208) 245-5309
Email: sandy@wgiheavyminerals.com

Plant: 4 miles south of Fernwood, HWY 3 Idaho

Brand Name or Grade:

Emerald Creek Garnet # 16
Emerald Creek Garnet # 36
Emerald Creek Garnet # 30/40

Expires:

8/31/13
8/31/13
8/31/13

Plant: HeLinGe Er County
Huhhot City, Inner Mongolia
China

Brand Name or Grade:

Western Garnet #20/40

Expires:

8/31/13

ATTACHMENT 4

DESIGN AND POSTING OF DUST CONTROL PERMIT SIGNAGE



POLICY ON DUST CONTROL PERMIT DESIGN AND POSTING OF SIGNAGE

Pursuant to Subsection 94.7.7 of the Air Quality Regulations, the Clark County Department of Air Quality (DAQ) has developed this policy to address questions related to the posting of informational signs on construction sites in Clark County, Nevada. Since this policy is referenced in the Regulations, non-compliance may result in a Notice of Violation pursuant to Section 94 of the Air Quality Regulations.

The following verbiage is excerpted from Section 94 for purposes of convenience:

94.7.7 Signage Requirements:

- 94.7.7.1 For each Dust Control Permit issued where the project site is less than or equal to ten (10) acres, or for trenching projects between one hundred (100) feet and one (1) mile in length, or for demolition of a structure totaling 1000 square feet or more, the applicant shall install a sign on said property prior to commencing construction activity that is visible to the public and measures, at minimum, four (4) feet wide by four (4) feet high, conforming to DAQ policy on Dust Control Permit Design and Posting of Signage.
- 94.7.7.2 For each Dust Control Permit aggregating over 10 acres, or for trenching projects aggregating one (1) mile or greater in length, the applicant shall install a sign on said property prior to commencing construction activity that is visible to the public and measures, at minimum, eight (8) feet wide by four (4) feet high, conforming to DAQ policy on Dust Control Permit Design and Posting of Signage.

In addition to the requirements listed pursuant to subsection 94.7.7, the Dust Control Permit sign shall conform to the following requirements:

1. The signboard shall be constructed with materials capable of withstanding the harsh environment (e.g., strong winds, intense sunlight) of Clark County.
 - (a) For 4'x4' signs, DAQ recommends the following materials:
 - (i) $\frac{3}{4}$ " A/C laminated plywood board;
 - (ii) Two (2) 4"x4" posts;
 - (iii) Posts should be attached to the edges of the plywood board with a minimum of two (2) carriage bolts on each post; and
 - (iv) The front surface of the signboard should be painted in the contrasting colors of a white background with black lettering.
 - (b) For 4'x8' signs, DAQ recommends the following materials:
 - (i) 1" A/C laminated plywood board;

- (ii) Two (2) 6"x6" posts;
- (iii) Posts should be attached to the 4' edges of the plywood board with at least 2 carriage bolts on each post; and
- (iv) The front surface of the signboard should be painted in the contrasting color of a white background with black lettering.

2. The sign board shall be installed and maintained in a condition such that members of the public can easily view, access, and read the sign at all times.

For all signs, DAQ recommends the following measures:

- (i) The lower edge of the sign board should be mounted a minimum of 2' above the existing ground surface to facilitate ease of viewing;
- (ii) Posts should be set in a hole a minimum of 3' deep with concrete footings to prevent downing by high winds;
- (iii) On the construction site, the sign should be positioned so that it is not obstructed from public view from the primary street access point;
- (iv) For construction projects that are developed in phases, the sign should be relocated to the area that is under active construction; and
- (v) In situations where all phases of the construction project are completed, a Certificate of Project Completion must be submitted to DAQ.

3. The sign board shall contain the following information:

- (a) Project Name;
- (b) Permittee Name;
- (c) Phone Number of Person Responsible for Dust Control Matters;
- (d) Clark County Department Air Quality & Environmental Management Phone Number;
- (e) Dust Control Permit Number;
- (f) Project Acreage.
- (g) Dust Control Permit Expiration Date.

4. The signboard shall be designed to the following alpha and numeric text dimensions (sign boards written in longhand are unacceptable).

(a) For a construction project subject to the 4'x4' signage requirement, DAQ provides the following example:

1" UPPERCASE Letters	PROJECT NAME: (Proj. Name)	3 ½" Title Case ¹ Bold Letters
1" UPPERCASE Letters	PERMITTEE: (Your Name)	3 ½" Title Case Bold Letters
1" Title Case Letters	Dust Control Matters Phone Number: (Your Number)	3" Bold Numbers
1" Title Case Letters	Clark County Department of Air Quality Phone Number: 385-DUST	3 ½" Bold Numbers
1" Title Case Letters	DUST CONTROL Permit Number: (Permit Number)	3" Bold Numbers
1" Title Case Letters	PROJECT ACREAGE: (≤10) EXPIRATION Date: (Prmt.Exp)	3" Bold Numbers

1/16" Thickness Underline	¼" Thickness Border
---------------------------	---------------------

¹ "Title Case" means the first letter of a word is capitalized and subsequent letters are lowercase

(b) For a construction site subject to the 4'x8' signage requirement, DAQ provides the following example:

2" UPPERCASE Letters	PROJECT NAME:	(Name from Permit)	4" Title Case ¹ Bold Letters
2" UPPERCASE Letters	PERMITTEE:	(Applicants Name)	4" Title Case Bold Letters
2" Title Case Letters	Dust Control Matters Phone Number:	(Your Phone Number)	4" Bold Numbers
2" Title Case Letters	Clark County Department of Air Quality Phone Number:	385-DUST	4 ½ " Bold Numbers
2" Title Case Letters	Dust Control Permit Number:	(Your Permit Number)	4" Bold Numbers
2" Title Case Letters	Project Acreage:	(>10)	4" Bold Numbers
	Expiration Date:	(Permit Exp)	

1/16" Thickness Underline

¼" Thickness Border

ATTACHMENT 5

AIR QUALITY REGULATIONS PERTAINING TO DUST CONTROL

1. Section 90 Fugitive Dust from Open Areas and Vacant Lots
2. Section 91 Fugitive Dust from Unpaved Roads, Unpaved Alleys, and Unpaved Easements Roads
3. Section 92 Fugitive Dust from Unpaved Parking Lots
4. Section 93 Fugitive Dust from Paved Roads and Street Sweeping Equipment
5. Section 94 Permitting and Dust Control for Construction Activities

CLARK COUNTY
AIR QUALITY REGULATIONS

SECTION 90 - FUGITIVE DUST FROM OPEN AREAS AND VACANT LOTS

90.1 FUGITIVE DUST From OPEN AREAS AND VACANT LOTS

90.1.1 Purpose: To limit the EMISSION of PARTICULATE MATTER into the AMBIENT AIR from OPEN AREAS AND VACANT LOTS.

90.1.2 Applicability: The provisions of this Regulation shall apply to OPEN AREAS AND VACANT LOTS which are located in the PM₁₀ NONATTAINMENT AREA (HYDROGRAPHIC BASIN 212) and the Apex Valley (HYDROGRAPHIC BASINS 216 and 217). Nothing in Section 90 of these Regulations shall be construed to prevent enforcement of Section 40 (Prohibition of NUISANCE Conditions) of these Regulations. The provisions of this Regulation shall not apply to Normal Farm Cultural Practices or the raising of fowl or animals. The provisions of this Regulation shall not apply to STATIONARY SOURCES as defined in Section 0, except that these control measures shall be considered as part of a BACT determination.

90.1.3 Effective Date Of This Regulation:

90.1.3.1 Section 90, adopted by the Clark County Board of County Commissioners on June 22, 2000, shall be effective in HYDROGRAPHIC BASIN 212 on January 1, 2001, except as otherwise provided herein.

90.1.3.2 Section 90 shall be effective in HYDROGRAPHIC BASINS 216 and 217 on April 1, 2002, except as otherwise provided herein.

90.2 Requirements:

90.2.1 OPEN AREAS AND VACANT LOTS: If OPEN AREAS AND VACANT LOTS are 5,000 square feet or larger and are disturbed by any means, including use by MOTOR VEHICLES and/or OFF-ROAD MOTOR VEHICLES or material dumping, then the OWNER AND/OR OPERATOR of such OPEN AREAS AND VACANT LOTS shall implement one or more of the CONTROL MEASURES described in Subsection 90.2.1.1 of this Regulation within 30 calendar days following the initial discovery of disturbance or vehicle use on OPEN AREAS AND VACANT LOTS. The OWNER AND/OR OPERATOR shall implement all control measures necessary to limit the disturbance of open areas and

vacant lots in accordance with the requirements of this regulation.
Advisory Notice: In order to conserve water to the greatest extent practicable, the use of RECLAIMED WATER is highly encouraged.

90.2.1.1 CONTROL MEASURES:

- (a) Where there is evidence of soil disturbance by MOTOR VEHICLES and/or OFF-ROAD VEHICLE use, prevent MOTOR VEHICLE and/or OFF-ROAD VEHICLE trespassing, parking, and/or access, by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees, or other effective traffic Control Measures. A stable surface area shall be established and maintained by using one of the CONTROL MEASURES set forth in Subsections 90.2.1.1(b) or (c) or by the effective application of water in compliance with the stabilization standards set forth in Subsection 90.2.1.2. Where measures to prevent vehicular trespassing and movement are not effective, the application of water will not be utilized for surface stabilization. For the purposes of this Subsection, use of or parking on OPEN AREAS AND VACANT LOTS for noncommercial and non-institutional purposes by the OWNER AND/OR OPERATOR of such OPEN AREAS AND VACANT LOTS shall not be considered vehicle use under this Subsection. In addition, vehicle use related to landscaping maintenance shall not be considered vehicle use under this Subsection. For the purpose of this Regulation, landscape maintenance does not include grading, trenching, or any other mechanized surface disturbing activities performed to establish initial landscapes or to redesign existing landscapes; or
- (b) Where a DISTURBED SURFACE AREA exists (including disturbed surfaces caused by MOTOR VEHICLES), uniformly apply and maintain surface gravel or DUST PALLIATIVES to all areas disturbed by MOTOR VEHICLES in compliance with one of the stabilization standards described in Subsection 90.2.1.2 of this Regulation; or
- (c) Where a DISTURBED SURFACE AREA exists (including disturbed surfaces caused by MOTOR VEHICLES and/or OFF-ROAD MOTOR VEHICLES), apply and maintain an alternative CONTROL MEASURE approved in writing by the CONTROL OFFICER and the Region IX ADMINISTRATOR of the Environmental Protection Agency (EPA).

90.2.1.2 Stabilization Standards:

- (a) A visible crust shall be established, as determined by Subsection 90.4.1.1 (The Drop Ball/Steel Ball Test) of these Regulations; or,

- (b) A percent cover that is equal to or greater than 20% for non-erodible elements shall be established, as determined by Subsection 90.4.1.2 (Rock Test Method) of these Regulations; or,
- (c) A threshold friction velocity, corrected for non-erodible elements of 100 cm/second or higher, shall be established, as determined by Subsection 90.4.1.3 (Determination Of Threshold Friction Velocity) of this Regulation; or,
- (d) An alternative test method approved in writing by the CONTROL OFFICER and the Region IX ADMINISTRATOR of the EPA.

90.2.2 **Dust Mitigation Plans Required:** Any OWNER AND/OR OPERATOR of OPEN AREAS AND VACANT LOTS having a cumulative area of 10,000 acres or greater must submit a dust mitigation plan to the Department of Air Quality and Environmental Management for approval by March 31, 2003, in a format prescribed by the CONTROL OFFICER.

90.2.3 **Mechanized Weed Abatement and/or Trash Removal:** If machinery is used to clear weeds and/or trash from OPEN AREAS AND VACANT LOTS of 5,000 square feet or larger, then the following Control Measures set forth in Subsection 90.2.3.1 shall be applied. **Advisory Notice:** In order to conserve water to the greatest extent practicable, the use of RECLAIMED WATER is highly encouraged.

90.2.3.1 **CONTROL MEASURES**

- (a) Pre-wet surface soils before mechanized weed abatement and/or trash removal occurs; and,
- (b) Maintain dust control measures while mechanized weed abatement and/or trash removal is occurring; and,
- (c) PAVE, apply gravel, apply water, or apply a suitable DUST PALLIATIVE, in compliance with the stabilization standards set forth in Subsection 90.2.1.2 of this Regulation, after mechanized weed abatement and/or trash removal occurs.

90.3 **Record Keeping Requirements**

90.3.1 **Record Keeping:** Any PERSON subject to the requirements of this Regulation shall compile and retain records that provide evidence of CONTROL MEASURE application, by indicating type of treatment or CONTROL MEASURE, extent of coverage, and date applied. The records and supporting documentation shall be made available to the CONTROL OFFICER within 24 hours of a written request.

90.3.2 **Record Retention:** Copies of the records required by Subsection 90.3.1 (Record Keeping Requirements) of this Regulation shall be retained for at least one year.

90.4 **Test Methods**

90.4.1 **Stabilization Standards For OPEN AREAS AND VACANT LOTS:** The test methods described in Subsections 90.4.1.1 through Subsections 90.4.1.3 of this Regulation shall be used to determine whether an OPEN AREA or a VACANT LOT has a stabilized surface. Should a disturbed OPEN AREA or VACANT LOT contain more than one type of disturbance, soil, or other characteristics which are visibly distinguishable, each representative surface must be tested separately for stability in an area that represents a random portion of the overall disturbed conditions of the site, utilizing the appropriate test methods in Subsections 90.4.1.1 through Subsections 90.4.1.3 of this Regulation. Depending upon test method results, include or eliminate each representative surface from the total size assessment of the DISTURBED SURFACE AREA(S).

90.4.1.1 **Soil Crust Determination (The Drop Ball Test):** Drop a steel ball with a diameter of 15.9 millimeters (0.625 inches) and a mass ranging from 16-17 grams from a distance of 30 centimeters (one foot) directly above the soil surface. If blowsand is present, clear the blowsand from the surfaces on which the soil crust test method is conducted. Blowsand is defined as thin deposits of loose uncombined grains covering less than 50% of an OPEN AREA or VACANT LOT which have not originated from the representative OPEN AREA or VACANT LOT surface being tested. If material covers a visible crust, which is not blowsand, apply the test method in Subsection 90.4.1.3 (Determination Of Threshold Friction Velocity) of this Regulation to the loose material to determine whether the surface is stabilized.

- (a) A sufficient crust is defined under the following conditions: once a ball has been dropped according to Subsection 90.4.1.1 of this Regulation, the ball does not sink into the surface, so that it is partially or fully surrounded by loose grains and, upon removal of the ball, the surface upon which it fell has not been pulverized, so that loose grains are visible.
- (b) Randomly select each representative DISTURBED SURFACE for the drop ball test by using a blind “over the shoulder” toss of a throwable object (for example, a metal weight with survey tape attached). Using the point of fall as the lower left hand corner, measure a 1-foot square area. Drop the ball three times within the 1-foot by 1-foot square survey area, using a consistent pattern

across the survey area. The survey area shall be considered to have passed the Soil Crust Determination Test if at least two of the three times the ball was dropped, the results met the criteria in Subsection 90.4.1.1(a) of this Regulation. Select at least two other survey areas that represent a random portion of the overall disturbed conditions of the site, and repeat this procedure. If the results meet the criteria of Subsection 90.4.1.1(a) of this Regulation for all of the survey areas tested, then the site shall be considered to have passed the Soil Crust Determination Test and shall be considered sufficiently crusted.

- (c) At any given site, the existence of a sufficient crust covering one portion of the site may not represent the existence or protectiveness of a crust on another portion of the site. Repeat the soil crust test as often as necessary on each portion of the overall conditions of the site using the random selection method set forth in Subsection 90.4.1.1(b) of this Regulation for an accurate assessment.

90.4.1.2 **Rock Test Method:** The Rock Test Method, which is similar to Subsection 90.4.1.3 (Determination Of Threshold Friction Velocity) of this Regulation, examines the wind-resistance effects of rocks and other non-erodible elements on disturbed surfaces. Non-erodible elements are objects larger than 1 centimeter (cm) in diameter that remain firmly in place even on windy days. Typically, non-erodible elements include rocks, stones, glass fragments, and hardpacked clumps of soil lying on or embedded in the surface. Vegetation does not count as a non-erodible element in this method. The purpose of this test method is to estimate the percent cover of non-erodible elements on a given surface to see whether such elements take up enough space to offer protection against windblown dust. For simplification, the following test method refers to all non-erodible elements as “rocks.”

- (a) Randomly select a 1 meter by 1 meter survey area within an area that represents the general rock distribution on the surface (a 1 meter by 1 meter area is slightly greater than a 3 foot by 3 foot area). Use a blind “over the shoulder” toss of a throwable object (for example, a metal weight with survey tape attached) to select the survey surface and using the point of fall as the lower left hand corner, measure a 1 meter by 1 meter survey area. Mark-off the survey area by tracing a straight, visible line in the dirt along the edge of a measuring tape or by placing short ropes, yard sticks, or other straight objects in a square around the survey area.
- (b) Without moving any of the rocks or other elements, examine the survey area. Since rocks greater than 3/8 inch (1 cm) in diameter

are of interest, measure the diameter of some of the smaller rocks to get a sense of which rocks need to be considered.

- (c) Mentally group the rocks greater than 3/8 inch (1cm) diameter lying in the survey area into small, medium, and large size categories. If the rocks are all approximately the same size, simply select a rock of average size and typical shape. Without removing any of the rocks from the ground, count the number of rocks in the survey area in each group and write down the resulting number.
- (d) Without removing rocks, select one or two average-size rocks in each group and measure the length and width. Use either metric units or standard units. Using a calculator, multiply the length times the width of the rocks to get the average dimensions of the rocks in each group. Write down the results for each rock group.
- (e) For each rock group, multiply the average dimensions (length times width) by the number of rocks counted in the group. Add the results from each rock group to get the total rock area within the survey area.
- (f) Divide the total rock area, calculated in Subsection 90.4.1.2(e) of this Regulation, by two (to get frontal area). Divide the resulting number by the size of the survey area (make sure the units of measurement match), and multiply by 100 for percent rock cover. For example, the total rock area is 1,400 square centimeters, divide 1,400 by 2 to get 700. Divide 700 by 10,000 (the survey area is 1 meter by 1 meter, which is 100 centimeters by 100 centimeters or 10,000 centimeters) and multiply by 100. The result is 7% rock cover. If rock measurements are made in inches, convert the survey area from meters to inches (1 inch = 2.54 centimeters).
- (g) Select and mark-off two additional survey areas and repeat the procedures described in Subsection 90.4.1.2(a) through Subsection 90.4.1.2(f) of this Regulation. Make sure the additional survey areas also represent the general rock distribution on the site. Average the percent cover results from all three survey areas to estimate the average percent of rock cover.
- (h) If the average rock cover is greater than or equal to 20%, the surface is stable. If the average rock cover is less than 20%, follow the procedures in Subsection 90.4.1.2(i) of this Regulation.
- (i) If the average rock cover is less than 20%, the surface may or may not be stable. Follow the procedures in Subsection 90.4.1.3 (Determination Of Threshold Friction Velocity) of this Regulation

and use the results from the rock test method as a correction (i.e., multiplication) factor. If the rock cover is at least 1%, such rock cover helps to limit windblown dust. However, depending on the soil's ability to release fine dust particles into the air, the percent rock cover may or may not be sufficient enough to stabilize the surface. It is also possible that the soil itself has a high enough Threshold Friction Velocity (TFV) to be stable without accounting for rock cover.

- (j) After completing the procedures described in Subsection 90.4.1.2(i) of this Regulation, use Table 2 of this Regulation to identify the appropriate correction factor to the TFV, depending on the percent rock cover. Multiply the correction factor by the TFV value for a final TFV estimate that is corrected for non-erodible elements.

90.4.1.3 **Determination Of Threshold Friction Velocity (TFV):** For DISTURBED SURFACE AREAS that are not crusted or vegetated, determine TFV according to the following sieving field procedure (based on a 1952 laboratory procedure published by W. S. Chepil).

- (a) Obtain and stack a set of sieves with the following openings: 4 millimeters (mm), 2 mm, 1 mm, 0.5 mm, and 0.25 mm, or obtain and stack a set of standard/commonly available sieves. Place the sieves in order according to size openings, beginning with the largest size opening at the top. Place a collector pan underneath the bottom (0.25 mm) sieve. Collect a sample of loose surface material from an area at least 30 cm by 30 cm in size, to a depth of approximately 1 cm using a brush and dustpan or other similar device. Only collect soil samples from dry surfaces (i.e., when the surface is not damp to the touch). Remove any rocks larger than 1 cm in diameter from the sample. Pour the sample into the top sieve (4 mm opening) and cover the sieve/collector pan unit with a lid. Minimize escape of particles into the air when transferring surface soil into the sieve/collector pan unit. Move the covered sieve/collector pan unit by hand using a broad, circular arm motion in the horizontal plane. Complete twenty circular arm movements, ten clockwise and ten counterclockwise, at a speed just necessary to achieve some relative horizontal motion between the sieves and the particles. Remove the lid from the sieve/collector pan unit and disassemble each sieve separately, beginning with the largest sieve. As each sieve is removed, examine it for loose particles. If loose particles have not been sifted to the finest sieve through which they can pass, reassemble and cover the sieve/collector pan unit and gently rotate it an additional ten times. After disassembling the sieve/collector pan unit, slightly tilt and gently tap each sieve, and the collector pan, so that material aligns along one side. In

doing so, minimize escape of particles into the air. Line up the sieves and collector pan in a row and visibly inspect the relative quantities of catch in order to determine which sieve (or whether the collector pan) contains the greatest volume of material. If a visual determination of relative volumes of catch among sieves is difficult, use a graduated cylinder to measure the volume. Estimate TFV for the sieve catch with the greatest volume using Table 1 of this Subsection, which provides a correlation between sieve opening size and TFV.

Table 1. Determination Of Threshold Friction Velocity

Tyler Sieve No.	ASTM 11 Sieve No.	Opening (mm)	TFV (cm/s)
5	5	4	135
9	10	2	100
16	18	1	76
32	35	0.5	58
60	60	0.25	43
Collector Pan	—	—	30

- (b) Collect at least three soil samples which represent random portions of the overall conditions of the site, repeat the above TFV test method for each sample and average the resulting TFVs together to determine the TFV uncorrected for non-erodible elements. Non-erodible elements are distinct elements, in the random portion of the overall conditions of the site, that are larger than 1 cm in diameter, remain firmly in place during a wind episode, and inhibit soil loss by consuming part of the shear stress of the wind. Non-erodible elements include stones and bulk surface material but do not include flat or standing vegetation. For surfaces with non-erodible elements, determine corrections to the TFV by identifying the fraction of the survey area, as viewed from directly overhead, that is occupied by non-erodible elements using the following procedure. For a more detailed description of this procedure, see Subsection 90.4.1.2 (Rock Test Method) of this Regulation. Select a survey area of 1 meter by 1 meter that represents a random portion of the overall conditions of the site. Where many non-erodible elements lie within the survey area, separate the non-erodible elements into groups according to size. For each group, calculate the overhead area for the non-erodible elements according to the following equations:

- Eq. 1: (Average length) x (Average width) = Average Dimensions.
 Eq. 2: (Average Dimensions) x (Number of Elements) = Overhead Area.
 Eq. 3: Overhead Area Of Group 1 + Overhead Area Of Group 2 (etc.) = Total Overhead Area.
 Eq. 4: Total Overhead Area/2 = Total Frontal Area.
 Eq. 5: (Total Frontal Area/Survey Area) x 100 = Percent Cover Of Non-Erodible Elements.

Note: Ensure consistent units of measurement (e.g. square meters or square inches when calculating percent cover).

Repeat this procedure on an additional two distinct survey areas that represent a random portion of the overall conditions of the site and average the results. Use Table 2 of this Subsection to identify the correction factor for the percent cover of non-erodible elements. Multiply the TFV by the corresponding correction factor to calculate the TFV corrected for non-erodible elements.

Table 2. Correction Factors For Threshold Friction Velocity

Percent Cover Of Non-Erodible Elements	Correction Factor
Greater than or equal to 10%	5
Greater than or equal to 5% and less than 10%	3
Less than 5% and greater than or equal to 1%	2
Less than 1%	None

 History: Initial adoption: June 22, 2000

Amended: November 16, 2000; November 20, 2001; December 17, 2002; June 3, 2003; July 1, 2004.

CLARK COUNTY

AIR QUALITY REGULATIONS

SECTION 91 - FUGITIVE DUST FROM UNPAVED ROADS, UNPAVED ALLEYS, AND UNPAVED EASEMENT ROADS

91.1 FUGITIVE DUST From Unpaved Roads, Unpaved Alleys, and Unpaved EASEMENT Roads

91.1.1 Purpose: To limit the Emission of PARTICULATE MATTER into the AMBIENT AIR from unpaved roads, unpaved alleys, unpaved ROAD EASEMENTS and unpaved access roads for utilities and railroads.

91.1.2 Applicability: The provisions of this Regulation shall apply to unpaved roads, which includes unpaved alleys, unpaved ROAD EASEMENTS and unpaved access roads for utilities and railroads which are located in the PM₁₀ NON-ATTAINMENT AREA (HYDROGRAPHIC BASIN 212) and the Apex Valley (HYDROGRAPHIC BASINS 216 and 217). Nothing in Subsections 91.1 through 91.3 of these Regulations shall be construed to prevent enforcement of Section 40 (Prohibition of NUISANCE Conditions) of these Regulations. The provisions of this Regulation shall not apply to non-commercial and non-institutional private driveways and shall not apply to horse trails, hiking paths, bicycle paths, or other similar paths that have been officially designated by a governing body for exclusive use for purposes other than travel by motor vehicles. The provisions of this Regulation shall not apply to STATIONARY SOURCES as defined in Section 0, except that these control measures shall be considered as part of a BACT determination.

91.1.3 Effective Date Of This Regulation:

91.1.3.1 Regulations 91.1 through 91.3 shall be effective in HYDROGRAPHIC BASIN 212 on their adoption by the District Board of Health of Clark County on June 22, 2000.

91.1.3.2 Regulations 91.1 through 91.3 shall be effective in HYDROGRAPHIC BASINS 216 and 217 on April 1, 2002.

91.2 Requirements:

91.2.1 Unpaved Roads: An OWNER AND/OR OPERATOR of an unpaved road in the PM₁₀ NON-ATTAINMENT AREA, shall implement one of the CONTROL MEASURES

set forth in Subsection 91.2.1.3 of this Regulation, except as set forth in Subsection 91.2.1.1 of this Regulation. For the purpose of this Regulation, the CONTROL MEASURES shall be considered effectively implemented when the unpaved roadway complies with the stabilization standards set forth in Subsection 91.2.1.4 of this Regulation. **Advisory Notice:** In order to conserve water to the greatest extent practicable, the use of RECLAIMED WATER is highly encouraged.

91.2.1.1 Implementation Of CONTROL MEASURES For Existing Unpaved Roads:

91.2.1.1.1 OWNERS AND/OR OPERATORS of existing unpaved roads that were constructed prior to June 22, 2000 in HYDROGRAPHIC BASIN 212 shall implement one of the CONTROL MEASURES set forth Subsection 91.2.1.3 of this Regulation according to the following schedule:

- (a) CONTROL MEASURES shall be implemented for one third (1/3) of the total miles of unpaved roads having vehicular traffic of 150 vehicles or more per day in accordance with Subsection 91.2.1.3 (CONTROL MEASURES) of this Regulation by June 1, 2001.
- 91 CONTROL MEASURES shall be implemented for two thirds (2/3) of the total miles of unpaved roads having vehicular traffic of 150 vehicles or more per day in accordance with Subsection 91.2.1.3 (CONTROL MEASURES) of this Regulation by June 1, 2002.
- (c) CONTROL MEASURES shall be implemented for all unpaved roads having vehicular traffic of 150 vehicles or more per day in accordance with Subsection 91.2.1.3 (CONTROL MEASURES) of this Regulation by June 1, 2003.
- (d) CONTROL MEASURES set forth in Subsection 91.2.1.3 shall be implemented for existing unpaved roads on which vehicular traffic is equal to or greater than 150 vehicles per day that develops after June 1, 2003. CONTROL MEASURES shall be implemented within 365 calendar days following the initial discovery that vehicular traffic equals or exceeds 150 vehicles per day and that the road surface does not comply with the stabilization standards set forth in Subsection 91.2.1.4 of this Regulation. The CONTROL OFFICER may require short-term stabilization of any unpaved road subject to Subsection 91.2.1.1(d).
- (e) Non-federal Requirement: CONTROL MEASURES set forth in Subsection 91.2.1.3 shall be implemented for existing unpaved roads having vehicular traffic of less than 150 vehicles per day within 365 calendar days following the initial discovery that the road surface does not comply with the stabilization standards set forth in Section 91.2.1.4 of this Regulation. The requirements of this

Subsection (91.2.1.1 (e)) shall not constitute applicable State Implementation Plan requirements pursuant to Section 189 of the federal Clean Air Act. The CONTROL OFFICER may require short-term stabilization of any unpaved road subject to Subsection 91.2.1.1 (e)). For the purpose of this Subsection, the CONTROL MEASURES shall be considered effectively implemented when the unpaved road complies with the stabilization standards set forth in Subsection 91.2.1.4 of this Regulation.

91.2.1.1.2 OWNERS AND/OR OPERATORS of existing unpaved roads that were constructed prior to April 1, 2002 in HYDROGRAPHIC BASINS 216 and 217 shall implement one of the CONTROL MEASURES set forth Subsection 91.2.1.3 of this Regulation according to the following schedule:

- (a) CONTROL MEASURES shall be implemented for one third (1/3) of the total miles of unpaved roads having vehicular traffic of 150 vehicles or more per day in accordance with Subsection 91.2.1.3 (CONTROL MEASURES) of this Regulation by April 1, 2003.
- (b) CONTROL MEASURES shall be implemented for two thirds (2/3) of the total miles of unpaved roads having vehicular traffic of 150 vehicles or more per day in accordance with Subsection 91.2.1.3 (CONTROL MEASURES) of this Regulation by April 1, 2004.
- (c) CONTROL MEASURES shall be implemented for all unpaved roads having vehicular traffic of 150 vehicles or more per day in accordance with Subsection 91.2.1.3 (CONTROL MEASURES) of this Regulation by April 1, 2005.
- (d) CONTROL MEASURES set forth in Subsection 91.2.1.3 shall be implemented for existing unpaved roads on which vehicular traffic is equal to or greater than 150 vehicles per day that develops after April 1, 2005. CONTROL MEASURES shall be implemented within 365 calendar days following the initial discovery that vehicular traffic equals or exceeds 150 vehicles per day and that the road surface does not comply with the stabilization standards set forth in Subsection 91.2.1.4 of this Regulation. The CONTROL OFFICER may require short-term stabilization of any unpaved road subject to Subsection 91.2.1.1(d).
- (e) Non-federal Requirement: CONTROL MEASURES set forth in Subsection 91.2.1.3 shall be implemented for existing unpaved roads having vehicular traffic of less than 150 vehicles per day within 365 calendar days following the initial discovery that the road surface does not comply with the stabilization standards set forth in Section 91.2.1.4 of this Regulation. The requirements of this Subsection (91.2.1.1 (e)) shall not constitute applicable State

Implementation Plan requirements pursuant to Section 189 of the federal Clean Air Act. The CONTROL OFFICER may require short-term stabilization of any unpaved road subject to Subsection 91.2.1.1 (e)). For the purpose of this Subsection, the CONTROL MEASURES shall be considered effectively implemented when the unpaved road complies with the stabilization standards set forth in Subsection 91.2.1.4 of this Regulation.

91.2.1.2 No unpaved roads or alleys may be constructed in public thoroughfares in HYDROGRAPHIC BASIN 212 after June 22, 2000, or in HYDROGRAPHIC BASINS 216 and 217 after April 1, 2002, unless the unpaved road is an interim component of an active paving project.

91.2.1.3 **CONTROL MEASURES:**

- (a) PAVE, or
- (b) Apply DUST PALLIATIVES, in compliance with the stabilization standards set forth in Subsection 91.2.1.4 of this Regulation, or
- (c) Apply and maintain an alternative CONTROL MEASURE approved in writing by the CONTROL OFFICER and the Region IX Administrator of the EPA.

91.2.1.4 **Stabilization Standards:** For the purpose of this rule, CONTROL MEASURES shall be considered effectively implemented when stabilization observations for FUGITIVE Dust EMISSIONS from unpaved roads and unpaved alleys do not exceed 20% OPACITY and do not equal or exceed 0.33 oz/ft² silt loading, or do not exceed 6% silt content, as determined by Subsection 91.4.1 of these Regulations.

91.3 **Record Keeping Requirements**

91.3.1 **Record Keeping:** Any person subject to the requirements of this Regulation shall compile and retain records that provide evidence of CONTROL MEASURE application, by indicating type of treatment or CONTROL MEASURE, extent of coverage, and date applied. The records and supporting documentation shall be made available to the CONTROL OFFICER within 24 hours from written or verbal request.

91.3.2 **Records Retention:** Copies of the records required by Subsection 91.3.1 (Record Keeping Requirements) of this Regulation shall be retained for at least one year.

91.3.3 **Reports Required:** In addition to complying with the record keeping requirements specified in Subsection 91.3.1, OWNERS of unpaved roads shall be subject to the requirements set forth in Subsection 91.2.1.1, and

shall prepare and submit a written report to the CONTROL OFFICER documenting compliance with the provisions of Subsection 91.2.1.1. This report shall be prepared for the years 2001, 2002, and 2003 for OWNERS of unpaved roads in HYDROGRAPHIC BASIN 212, for the years 2003, 2004, and 2005 for OWNERS of unpaved roads in HYDROGRAPHIC BASINS 216 and 217, and shall be submitted to the CONTROL OFFICER no later than October first of each year and shall include:

- 91.3.3.1 The total miles of unpaved roads under the jurisdiction of the OWNER and the miles PAVED during the reporting period subject to the requirements of Subsection 91.2.1.1. Miles of PAVING for roads subject to Subsections 91.2.1.1.1(a), 91.2.1.1.1(b), and 91.2.1.1.1(c) must be listed separately from paving of roads found to be subject Subsection 91.2.1.1.1 (d). Miles of PAVING for roads subject to Subsections 91.2.1.1.2(a), 91.2.1.1.2(b), and 91.2.1.1.2(c) must be listed separately from paving of roads found to be subject Subsection 91.2.1.1.2(d).

91.4 **Test Methods**

91.4.1 **Stabilization Test Methods For Unpaved Roads And Unpaved Alleys:**

- 91.4.1.1 **OPACITY Test Method:** The purpose of this test method is to estimate the percent OPACITY of FUGITIVE DUST plumes caused by vehicle movement on unpaved roads, unpaved alleys, and unpaved EASEMENTS. This method can only be conducted by an individual who has received certification as a qualified Visible EMISSIONS Evaluator.

- (a) Step 1: Stand at least 16.5 feet from the FUGITIVE DUST source in order to provide a clear view of the EMISSIONS with the sun oriented in the 140-degree sector to the back. Following the above requirements, make OPACITY observations so that the line of vision is approximately perpendicular to the dust plume and wind direction. If multiple plumes are involved, do not include more than one plume in the line of sight at one time.
- (b) Step 2: Record the FUGITIVE DUST source location, source type, method of control used, if any, observer's name, certification data and affiliation, and a sketch of the observer's position relative to the FUGITIVE DUST source. Also, record the time, estimated distance to the FUGITIVE DUST source location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), observer's position to the FUGITIVE DUST source, and color of the plume and type of background on the visible emission observation form both when OPACITY readings are initiated and completed.

- (c) Step 3: Make OPACITY observations, to the extent possible, using a contrasting background that is perpendicular to the line of vision. Make OPACITY observations approximately 1 meter above the surface from which the plume is generated. Note that the observation is to be made at only one visual point upon generation of a plume, as opposed to visually tracking the entire length of a dust plume as it is created along a surface. Make two observations per vehicle, beginning with the first reading at zero seconds and the second reading at five seconds. The zero-second observation should begin immediately after a plume has been created above the surface involved. Do not look continuously at the plume but, instead, observe the plume briefly at zero seconds and then again at five seconds.
- (d) Step 4: Record the OPACITY observations to the nearest 5% on an observational record sheet. Each momentary observation recorded represents the average OPACITY of EMISSIONS for a 5-second period. While it is not required by the test method, EPA recommends that the observer estimate the size of vehicles which generate dust plumes for which readings are taken (e.g. mid-size passenger car or heavy-duty truck) and the approximate speeds the vehicles are traveling when readings are taken.
- (e) Step 5: Repeat Step 3 (Subsection 91.4.1.1(c) of this Regulation) and Step 4 (Subsection 91.4.1.1 (d) of this Regulation) until you have recorded a total of 12 consecutive OPACITY readings. This will occur once six vehicles have driven on the source in your line of observation for which you are able to take proper readings. The 12 consecutive readings must be taken within the same period of observation but must not exceed 1 hour. Observations immediately preceding and following interrupted observations can be considered consecutive.
- (f) Step 6: Average the 12 OPACITY readings together. If the average OPACITY reading equals 20% or lower, the source is in compliance with the OPACITY standard described in Section 91 of these Regulations.

91.4.1.2 **Silt Content Test Method:** The purpose of this test method is to estimate the silt content of the trafficked parts of unpaved roads, unpaved alleys, and unpaved EASEMENTS. The higher the silt content, the greater the amount of fine dust particles that are entrained into the atmosphere when cars and trucks drive on unpaved roads, unpaved alleys, and unpaved EASEMENTS.

- (a) Equipment:

- (1) A set of sieves with the following openings: 4 millimeters (mm), 2 mm, 1 mm, 0.5 mm and 0.25 mm, a lid, and collector pan
 - (2) A small whiskbroom or paintbrush with stiff bristles and dustpan 1 foot in width (the broom/brush should preferably have one, thin row of bristles no longer than 1.5 inches in length)
 - (3) A spatula without holes
 - (4) A small scale with half ounce increments (e.g., postal/package scale)
 - (5) A shallow, lightweight container (e.g., plastic storage container)
 - (6) A sturdy cardboard box or other rigid object with a level surface
 - (7) A calculator
 - (8) Cloth gloves (optional for handling metal sieves on hot, sunny days)
 - (9) Sealable plastic bags (if sending samples to a laboratory)
 - (10) A pencil/pen and paper
- (b) Step 1: Look for a routinely traveled surface, as evidenced by tire tracks (only collect samples from surfaces that are not damp due to precipitation or dew). This statement is not meant to be a standard in itself for dampness where watering is being used as a CONTROL MEASURE. It is only intended to ensure that surface testing is done in a representative manner. Use caution when taking samples to ensure personal safety with respect to passing vehicles. Gently press the edge of a dustpan (1 foot in width) into the surface four times to mark an area that is 1 square foot. Collect a sample of loose surface material using a whiskbroom or brush and slowly sweep the material into the dustpan, minimizing escape of dust particles. Use a spatula to lift heavier elements such as gravel. Only collect dirt/gravel to an approximate depth of 3/8 inch or 1 cm in the 1 square foot area. If you reach a hard, underlying subsurface that is greater than 3/8 inch in depth, do not continue collecting the sample by digging into the hard surface. In other words, you are only collecting a surface sample of loose material down to 1 cm. In order to confirm that samples are collected to 1

cm in depth, a wooden dowel or other similar narrow object at least one foot in length can be laid horizontally across the survey area while a metric ruler is held perpendicular to the dowel.

- At this point, you can choose to place the sample collected into a plastic bag or container and take it to an independent laboratory for silt content analysis. A reference to the procedure the laboratory is required to follow is at the end of this section.
- (c) Step 2: Place a scale on a level surface. Place a lightweight container on the scale. Zero the scale with the weight of the empty container on it. Transfer the entire sample collected in the dustpan to the container, minimizing escape of dust particles. Weigh the sample and record its weight.
- (d) Step 3: Stack a set of sieves in order according to the size openings specified above, beginning with the largest size opening (4 mm) at the top. Place a collector pan underneath the bottom (0.25 mm) sieve.
- (e) Step 4: Carefully pour the sample into the sieve stack, minimizing escape of dust particles by slowly brushing material into the stack with a whiskbroom or brush (on windy days, use the trunk or door of a car as a wind barricade). Cover the stack with a lid. Lift up the sieve stack and shake it vigorously up, down and sideways for at least 1 minute.
- (f) Step 5: Remove the lid from the stack and disassemble each sieve separately, beginning with the top sieve. As you remove each sieve, examine it to make sure that all of the material has been sifted to the finest sieve through which it can pass; e.g. material in each sieve (besides the top sieve that captures a range of larger elements) should look the same size. If this is not the case, re-stack the sieves and collector pan, cover the stack with the lid, and shake it again for at least 1 minute (you only need to reassemble the sieve(s) that contain material, which requires further sifting).
- (g) Step 6: After disassembling the sieves and collector pan, slowly sweep the material from the collector pan into the empty container originally used to collect and weigh the entire sample. Take care to minimize escape of dust particles. You do not need to do anything with material captured in the sieves; only the collector pan. Weigh the container with the material from the collector pan and record its weight.

- (h) Step 7: If the source is an unpaved road, multiply the resulting weight by 0.38. If the source is an UNPAVED PARKING LOT, multiply the resulting weight by 0.55. The resulting number is the estimated silt loading. Then, divide by the total weight of the sample you recorded earlier in Step 2 (Subsection 91.4.1.2(c) of this Regulation) and multiply by 100 to estimate the percent silt content.
- (i) Step 8: Select another two routinely traveled portions of the unpaved road or UNPAVED PARKING LOT and repeat this test method. Once you have calculated the silt loading and percent silt content of the 3 samples collected, average your results together.
- (j) Step 9: Examine Results. If the average silt loading is less than 0.33 oz/ft², the surface is stable. If the average silt loading is greater than or equal to 0.33 oz/ft², then proceed to examine the average percent silt content. If the source is an unpaved road, unpaved alley, or unpaved EASEMENT and the average percent silt content is 6% or less, the surface is stable. If your field test results are within 2% of the standard (for example, 4%-8% silt content on an unpaved road, alley, or EASEMENT), it is recommended that you collect 3 additional samples from the source according to Step 1 (Subsection 91.4.1.2(b) of this Regulation) and take them to an independent laboratory for silt content analysis.
- (k) Independent Laboratory Analysis: You may choose to collect 3 samples from the source, according to Step 1 (Subsection 91.4.1.2(b) of this Regulation), and send them to an independent laboratory for silt content analysis rather than conduct the sieve field procedure. If so, the test method the laboratory is required to use is:

"Procedures For Laboratory Analysis Of Surface/Bulk Loading Samples", (Fifth Edition, Volume I, Appendix C.2.3 "Silt Analysis", 1995), AP-42, Office of Air Quality Planning & Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina

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SECTION 92: FUGITIVE DUST FROM UNPAVED PARKING LOTS AND STORAGE AREAS

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92.1 Fugitive Dust from Unpaved Parking Lots and Storage Areas

92.1.1 Purpose

The purpose of this section is to limit the emission of particulate matter into the ambient air from unpaved parking lots, including storage areas as defined in Section 0.

92.1.2 Applicability

The provisions of this regulation shall apply to unpaved parking lots and storage areas which are located in the PM₁₀ nonattainment area (Hydrographic Basin 212) or in the Apex Valley (Hydrographic Basins 216 and 217), and which are not regulated by Section 94. Unpaved parking lots and storage areas include automobile impound yards, wrecking yards, automobile dismantling yards, salvage yards, material handling yards, equestrian staging facilities, and storage yards. For the purposes of this regulation, maneuvering shall not include military maneuvers or exercises conducted on federal facilities. Nothing in Sections 92.1 through 92.6 shall be construed to prevent enforcement of Section 40 ("Prohibition of Nuisance Conditions"). The provisions of this regulation shall not apply to stationary sources as defined in Section 0, except that these control measures shall be considered as part of a BACT determination.

92.2 Definitions

- (a) The following term has the meanings set forth below for the purposes of Section 92. Any term not defined in these paragraphs shall have the meaning given in Section 0 or the Clean Air Act.
- (b) "Equestrian staging area" means the area(s) used exclusively to load, unload, and saddle horses; organize riders before a ride; and park vehicles used to transport horses.

92.3 Requirements

- 92.3.1** The owner and/or operator of an existing unpaved parking lot or storage area in Hydrographic Basins 212, 216, or 217 shall implement one or more of the control measures described in Section 92.3.1.2 as necessary to comply with the stabilization standards of Section 92.4.1. For unpaved parking lots and storage areas that are utilized intermittently, for a period of 35 days or less during the calendar year, the owner and/or operator shall implement one or more of the control measures described in Section 92. 3.1.2 during the period that the unpaved parking lot or storage area is utilized for vehicle parking or storage. For the purpose of this regulation, the control measures set forth in Section 92.3.1.2 shall be considered

effectively implemented when the unpaved parking lot or storage area meets the stabilization standards described in Section 92.4.1.

92.3.1.1 New Unpaved Parking Lots or Storage Areas

No unpaved parking lots or storage areas may be constructed in Hydrographic Basins 212, 216, or 217 as of January 1, 2003 except as provided in this section.

- (a) **Exemptions.** The requirements of this Section shall not be applicable to parking lots for rural public facilities, such as trailheads, campgrounds, and similar facilities where paved parking lots would conflict with the rural nature of these facilities, provided such unpaved parking lot is stabilized in accordance with Sections 92. 3.1.2(b) through (d) prior to being used. For the purposes of this Section, a rural public facility shall not include any facility located within the BLM Disposal Boundary.
- (b) **Material Storage and Handling Areas.** If an area is used for storing and handling of landscaping, aggregate, and other similar bulk materials, the owner and/or operator shall implement one or more of the control measures described in Section 92. 3.1.2, subject to the approval of the Control Officer, provided, however, that all access, parking, and loading areas used by on-road vehicles shall be paved.
- (c) **Tracked, Non-Rubber Tired Vehicle, or Heavy Equipment Storage Areas.** If an area is used primarily for storage of non-rubber tired vehicles or equipment that the control officer has determined to be of such weight as to damage or destroy pavement (e.g., heavy equipment), the owner and/or operator shall implement one or more of the control measures described in Section 92.3.1.2, subject to the approval of the Control Officer, provided, however, that all access, parking, and loading areas primarily used by rubber-tired vehicles shall be paved.
- (d) **Equestrian Staging Areas:** Areas designed and used exclusively for the loading, unloading, and saddling of horses for equestrian activities shall be exempt from the paving requirements of this section if control measures applied to the designated areas meet the performance standards of Section 92.4. Posted vehicle speed limits for vehicles using such designated areas shall not exceed 10 miles per hour.

92.3.1.2 Control Measures

- (e) Pave;

- (f) Apply dust palliatives, in compliance with the stabilization standards set forth in Section 92.4.1;
- (g) Apply dust palliatives to vehicle travel lanes within the parking lot or storage area in compliance with the stabilization standards set forth in Section 92.4.1, and uniformly apply and maintain surface gravel or recycled asphalt to a depth of two inches on the vehicle parking areas;
- (h) Apply and maintain an alternative control measure approved in writing by the Control Officer and the EPA Region 9 Administrator.

92.4 Performance Standards

92.4.1 Stabilization Standards

For the purpose of this regulation, control measures shall be considered effectively implemented when stabilization observations for fugitive dust emissions from unpaved parking lots or storage areas do not exceed 20 percent opacity and do not equal or exceed 0.33 oz/ft² silt loading, or do not exceed 8 percent silt content, as determined by Section 92.6 ("Test Methods"), except in areas on which gravel has been applied under the provisions of Section 92.3.1.2(c).

92.4.2 Prohibition of Dust Over Property Line

Where Best Available Control Measures provided for in this regulation have not been applied, no owner and/or operator of an unpaved parking lot or storage area shall permit a dust plume from that unpaved parking lot or storage area to cross a property line.

92.5 Recordkeeping Requirements

92.5.1 Recordkeeping

Any person subject to the requirements of this regulation shall compile and retain records that provide evidence of control measure application, by indicating type of treatment or control measure, extent of coverage, and date applied. The records and supporting documentation shall be made available to the Control Officer within 24 hours of a written request.

92.5.2 Records Retention

Copies of the records required by Section 92.5.1 shall be retained for at least one year. Facilities subject to Section 12.5 ("Part 70 Operating Permit Requirements") shall maintain records in accordance with Part 70 record keeping requirements.

92.6 Test Methods

92.6.1 Stabilization Test Methods for Unpaved Parking Lots and Storage Areas

92.6.1.1 Opacity Test Method

The purpose of this test method is to estimate the percent opacity of fugitive dust plumes caused by vehicle movement on unpaved parking lots and storage areas. This method can only be conducted by an individual who has received certification as a qualified Visible Emissions Evaluator.

- (a) Step 1: Stand at least 16.5 feet from the fugitive dust source in order to provide a clear view of the emissions, with the sun oriented in the 140-degree sector to the back. Following the above requirements, make opacity observations so that the line of vision is approximately perpendicular to the dust plume and wind direction. If multiple plumes are involved, do not include more than one plume in the line of sight at one time.
- (b) Step 2: Record the fugitive dust source location, source type, method of control used (if any), evaluator's name, certification data and affiliation, and a sketch of the observer's position relative to the fugitive dust source. Also, record the time, estimated distance to the fugitive dust source location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), and color of the plume and type of background on the visible emission observation form when opacity readings are both initiated and completed.
- (c) Step 3: Make opacity observations, to the extent possible, using a contrasting background that is perpendicular to the line of vision. Make opacity observations approximately 1 meter above the surface from which the plume is generated. Note that the observation is to be made at only one visual point upon generation of a plume, as opposed to visually tracking the entire length of a dust plume as it is created along a surface. Make two observations per vehicle, beginning with the first reading at zero seconds and the second reading at five seconds. The zero-second observation should begin immediately after a plume has been created above the surface involved. Do not look continuously at the plume but, instead, observe the plume briefly at zero seconds and then again at five seconds.
- (d) Step 4: Record the opacity observations to the nearest 5 percent on an observational record sheet. Each momentary observation recorded represents the average opacity of emissions for a five-

second period. While it is not required by the test method, EPA recommends that the observer estimate the size of vehicles that generate dust plumes for which readings are taken (e.g., mid-size passenger car or heavy-duty truck) and the approximate speeds the vehicles are traveling when readings are taken.

- (e) Step 5: Repeat Steps 3 and 4 until you have recorded a total of 12 consecutive opacity readings. This will occur once six vehicles have driven on the source in your line of observation for which you are able to take proper readings. The 12 consecutive readings must be taken within the same period of observation, but must not exceed one hour. Observations immediately preceding and following interrupted observations can be considered consecutive.
- (f) Step 6: Average the 12 opacity readings together. If the average opacity reading equals 20 percent or lower, the source is in compliance with the opacity standard described in this regulation.

92.6.1.2 Silt Content Test Method

The purpose of this test method is to estimate the silt content of the trafficked parts of unpaved parking lots and storage areas. The higher the silt content, the greater the amount of fine dust particles that are entrained into the atmosphere when cars and trucks drive on unpaved parking lots or storage areas.

- (a) Equipment:
 - (1) Set of sieves with the following openings: 4 millimeters (mm), 2 mm, 1 mm, 0.5 mm, and 0.25 mm; a lid; and collector pan;
 - (2) Small whiskbroom or paintbrush with stiff bristles and dustpan one foot in width (the broom/brush should preferably have one, thin row of bristles no longer than 1.5 inches in length);
 - (3) Spatula without holes;
 - (4) Small scale with half-ounce increments (e.g., postal/package scale);
 - (5) Shallow, lightweight container (e.g., plastic storage container);
 - (6) Sturdy cardboard box or other rigid object with a level surface;

- (7) Basic calculator;
 - (8) Cloth gloves (optional for handling metal sieves on hot, sunny days);
 - (9) Sealable plastic bags (if sending samples to a laboratory);
and
 - (10) Pencil/pen and paper.
- (b) Step 1: Look for a routinely traveled surface, as evidenced by tire tracks (only collect samples from surfaces that are not damp due to precipitation or dew). This statement is not meant to be a standard in itself for dampness where watering is being used as a control measure; it is only intended to ensure that surface testing is done in a representative manner. Use caution when taking samples to ensure personal safety with respect to passing vehicles. Gently press the edge of a dustpan (1 foot in width) into the surface four times to mark an area that is 1 square foot. Collect a sample of loose surface material using a whiskbroom or brush and slowly sweep the material into the dustpan, minimizing escape of dust particles. Use a spatula to lift heavier elements such as gravel. Only collect dirt/gravel to an approximate depth of 3/8 inch or 1 cm in the 1 square foot area. If you reach a hard, underlying subsurface that is greater than 3/8 inch in depth, do not continue collecting the sample by digging into the hard surface. In other words, you are only collecting a surface sample of loose material down to 1 cm. In order to confirm that samples are collected to 1 cm in depth, a wooden dowel or other similar narrow object at least one foot in length can be laid horizontally across the survey area while a metric ruler is held perpendicular to the dowel.
- (1) At this point, the sample can be collected into a plastic bag or container and take it to an independent laboratory for silt content analysis. A reference to the procedure the laboratory is required to follow is at the end of this section.
- (c) Step 2: Place a scale on a level surface. Place a lightweight container on the scale. Zero the scale with the weight of the empty container on it. Transfer the entire sample collected in the dustpan to the container, minimizing escape of dust particles. Weigh the sample and record its weight.
- (d) Step 3: Stack a set of sieves in order according to the size openings specified above, beginning with the largest size opening (4 mm) at the top. Place a collector pan underneath the bottom (0.25 mm) sieve.

- (e) Step 4: Carefully pour the sample into the sieve stack, minimizing escape of dust particles by slowly brushing material into the stack with a whiskbroom or brush (on windy days, use the trunk or door of a car as a wind barricade). Cover the stack with a lid. Lift the sieve stack and shake it vigorously up, down, and sideways for at least 1 minute.
- (f) Step 5: Remove the lid from the stack and disassemble each sieve separately, beginning with the top sieve. As you remove each sieve, examine it to make sure that all of the material has been sifted to the finest sieve through which it can pass; e.g., material in each sieve (besides the top sieve that captures a range of larger elements) should look the same size. If this is not the case, restack the sieves and collector pan, cover the stack with the lid, and shake it again for at least 1 minute (you only need to reassemble the sieve(s) that contain material, which requires further sifting).
- (g) Step 6: After disassembling the sieves and collector pan, slowly sweep the material from the collector pan into the empty container originally used to collect and weigh the entire sample. Take care to minimize escape of dust particles. You do not need to do anything with material captured in the sieves; only the collector pan. Weigh the container with the material from the collector pan and record its weight.
- (h) Step 7: If the source is an unpaved road, multiply the resulting weight by 0.38. If the source is an unpaved parking lot or storage area, multiply the resulting weight by 0.55. The resulting number is the estimated silt loading. Then, divide by the total weight of the sample you recorded earlier in Step 2 and multiply by 100 to estimate the percent silt content.
- (i) Step 8: Select another two routinely traveled portions of the unpaved road or unpaved parking lot and repeat this test method. Once you have calculated the silt loading and percent silt content of the three samples collected, average your results together.
- (j) Step 9: Examine the results. If the average silt loading is less than 0.33 oz/ft², the surface is stable. If the average silt loading is greater than or equal to 0.33 oz/ft², then examine the average percent silt content. If the source is an unpaved parking lot or storage area and the average percent silt content is 8 percent or less, the surface is stable. If your field test results are within 2 percent of the standard (for example, 6-10 percent silt content on an unpaved parking lot or storage area), it is recommended that you collect three additional samples from the source according to Step 1 and take them to an independent laboratory for silt content analysis.

- (k) You may choose to collect three samples from the source, according to Step 1, and send them to an independent laboratory for silt content analysis rather than conduct the sieve field procedure. If so, the test method the laboratory is required to use is described in Volume 1, Appendix C.2.3 (“Silt Analysis”) of EPA’s *Procedures For Laboratory Analysis of Surface/Bulk Loading Samples* (1995, fifth edition).

History: Initial adoption: June 22, 2000

Amended: November 16, 2000; November 20, 2001; December 17, 2002; June 3, 2003; July 1, 2004; December 30, 2008; March 17, 2009; August 2, 2011

CLARK COUNTY
AIR QUALITY REGULATIONS

**SECTION 93 - FUGITIVE DUST FROM PAVED ROADS AND STREET
SWEEPING EQUIPMENT**

93.1 FUGITIVE DUST From PAVED Roads and Street Sweeping Equipment

93.1.1 Purpose: To limit the EMISSION of PARTICULATE MATTER into the AMBIENT AIR from PAVED roads and PAVED alleys.

93.1.2 Applicability: The provisions of this Regulation shall apply to PAVED roads and PAVED alleys which are located in the PM₁₀ NONATTAINMENT AREA (HYDROGRAPHIC BASIN 212) and the Apex Valley (HYDROGRAPHIC BASINS 216 and 217). Nothing in Subsections 93.1 through 93.4 of these Regulations shall be construed to prevent enforcement of Section 40 (Prohibition of NUISANCE Conditions) of these Regulations. The provisions of this Regulation shall not apply to non-commercial and non-institutional private driveways. The provisions of this Regulation shall not apply to STATIONARY SOURCES as defined in Section 0, except that these control measures shall be considered as part of a BACT determination.

93.2 Requirements:

93.2.1 PAVED Road Development Standards: OWNERS AND/OR OPERATORS having jurisdiction over, or ownership of, public or private PAVED roads shall construct, or require to be constructed, all new or modified PAVED roads in conformance with the road shoulder width and drivable median stabilization requirements as specified below:

93.2.1.1 New CONSTRUCTION, MODIFICATION, or approvals of PAVED roads shall be constructed with a PAVED travel section, and four (4) feet of PAVED or stabilized shoulder on each side of the PAVED travel section. The four (4) feet of shoulder shall be PAVED or stabilized with a dust palliative or gravel to prevent the trackout of mud and dirt to the PAVED section. Where shoulder stabilization is used in place of PAVING, the stabilized shoulders must be maintained in compliance with the stabilization standards set forth in Subsection 93.2.1.5 of this Regulation.

- 93.2.1.2 New CONSTRUCTION, MODIFICATION, or approvals of PAVED roads on which vehicular traffic is greater than or equal to 3,000 vehicles per day after March 1, 2003 shall be constructed with a PAVED travel section, and eight (8) feet of stabilized shoulder adjacent to the PAVED travel section where right-of-way is available for the stabilized shoulder. Where the right-of-way is not available for the full eight (8) feet of stabilized shoulder, curbing shall be installed adjacent to the shoulder. Stabilized shoulders must be maintained in compliance with the stabilization standards set forth in Subsection 93.2.1.5 of this regulation.
- 93.2.1.3 Where curbing is constructed adjacent to and contiguous with the travel lane or PAVED shoulder of a road, the shoulder width design standards specified in Subsection 93.2.1.1 shall not be applicable.
- 93.2.1.4 Where PAVED roads are constructed, or modified with shoulders and/or medians, the shoulders and/or medians shall be constructed as set forth below. If the shoulder, median, or extended right-of-way is located in a limited access freeway right-of-way, then the requirements of Section 90 apply.
- (a) With curbing, or
 - (b) With solid PAVING across the median, or
 - (c) Apply DUST PALLIATIVES, in compliance with the stabilization standards set forth in Subsection 93.2.1.5 of this Regulation, or
 - (d) Apply two (2) inches of gravel in compliance with the stabilization standards set forth in Subsection 93.2.1.5 of this Regulation, or
 - (e) With materials that prevent the trackout of mud and dirt to the PAVED section such as landscaping or decorative rock.
- 93.2.1.5 Stabilization Standards: For the purpose of this regulation, the unpaved shoulders and medians of PAVED roads shall be considered to have CONTROL MEASURES effectively implemented when FUGITIVE DUST EMISSIONS do not exceed 20% OPACITY and silt loading does not equal or exceed 0.33 oz/ft² silt loading, as determined by Subsection 93.4.1 (Test Methods-Stabilized PAVED Road Shoulders and Medians) of these regulations, except for unpaved shoulders on which gravel has been applied under the provisions of Subsection 93.2.1.1. Failure to comply with either the 20% OPACITY limit or silt loading limit indicates that the shoulder is not stable. Where gravel is utilized to prevent trackout from unpaved shoulders and medians of PAVED roads, surface gravel shall be

uniformly applied and maintained to a depth of two (2) inches to comply with the 20% OPACITY standards set forth in Subsection 93.4.1.1 of these Regulations and the Gravel Depth And Silt Content Test Method set forth in Subsection 93.4.1.3 of these Regulations. For the purposes of this section, the term Gravel shall include "aggregate" and shall mean unconsolidated material greater than 0.25 (1/4) inch but less than three (3) inches, and contain no more than six (6) percent silt, by dry weight, that will pass through a No. 200 sieve. Failure to comply with either the 20% OPACITY limit or the Gravel Depth And Silt Content Test Method indicates that the shoulder is not stable.

93.2.1.6 **Requirements For Existing Nonconforming PAVED Roads:** OWNERS AND/OR OPERATORS having jurisdiction over, or ownership of, existing public or private PAVED roads which do not conform with the requirements of Subsections 93.2.1.1 through 93.2.1.5 of this Regulation, shall reconstruct, or require to be reconstructed, the existing nonconforming PAVED road within 365 calendar days following the initial discovery that the road fails to meet the requirements set forth in Subsections 93.2.1.1 through 93.2.1.5 of these Regulations. The CONTROL OFFICER may require short-term stabilization of any PAVED road subject to the requirements set forth in Subsections 93.2.1.1 through 93.2.1. of these Regulations. Other stabilization methods of equal or greater effectiveness may be implemented with the written approval of the CONTROL OFFICER, providing emissions do not exceed 20% opacity, unless the US EPA Region 9 objects to such approval within ninety (90) days from the date notification of the proposed alternative stabilization method is sent to the US EPA Region 9 by the CONTROL OFFICER. If the US EPA Region 9 does not object within the ninety (90) days from the date notification, the proposed alternative stabilization method may be implemented. If the US EPA Region 9 objects to the proposed alternative stabilization method, the proposed alternative stabilization method shall require written approval from both the CONTROL OFFICER and the US EPA Region 9 prior to the implementation of the proposed alternative stabilization method.

93.2.2 **Street Sweeper Requirements:** After January 1, 2001, any OWNER AND/OR OPERATOR which utilizes street sweeping equipment or street sweeping services for street sweeping on PAVED roads or PAVED parking lots, shall acquire or contract to acquire only certified PM₁₀-efficient street sweeping equipment.

93.2.2.1 **PM₁₀-Efficient Street Sweepers:** For the purposes of Subsection 93.2.2 of this Regulation, a PM₁₀-efficient street sweeper is a street sweeper which has been certified by the South Coast Air Quality Management District (California) (SCAQMD) to comply with the District's performance

standards set forth in SCAQMD Rule 1186 utilizing the test methods set forth in SCAQMD Rule 1186, Appendix A.

- 93.2.3 **Equipment Restriction:** The use of dry rotary brushes and blower devices for the removal of dirt, rock, or other debris from a PAVED road or PAVED parking lot is prohibited without the use of sufficient wetting to limit the visible emissions to not greater than 20% opacity when measured as set forth in Subsection 93.4.1.1. The use of dry rotary brushes or blower devices without the use of water is expressly prohibited.
- 93.2.4 **Crack Seal Equipment Requirements:** After December 31, 2005 any OWNER AND/OR OPERATOR which utilizes crack seal cleaning equipment shall acquire, or contract to acquire, only vacuum type crack cleaning seal equipment.
- 93.3 **Record Keeping And Reporting Requirements**
- 93.3.1 **Record Keeping:** Any PERSON subject to the requirements of this Regulation shall compile and retain records that provide evidence of CONTROL MEASURE application, by indicating type of treatment or CONTROL MEASURE, extent of coverage, and date applied. The records and supporting documentation shall be made available to the CONTROL OFFICER within 24 hours of a written request.
- 93.3.2 **Reporting Requirements:** OWNERS AND/OR OPERATORS having jurisdiction over PAVED roads shall prepare and submit a written report to the Clark County Department of Air Quality and Environmental Management documenting compliance with the provisions of this Regulation. This report shall be prepared annually on a calendar year basis. The reports shall be transmitted no later than 90 days after the end of the calendar year and shall include:
- 93.3.2.1 The total miles of PAVED roads under the jurisdiction of the OWNER AND/OR OPERATOR and the miles of PAVED roads constructed or modified during the reporting period.
- 93.3.2.2 For newly constructed or modified roads, documentation on how the requirements of Subsections 93.2.1.1 through 93.2.1.5 have been met.
- 93.3.2.3 Other information which may be needed by the CONTROL OFFICER for compliance with EPA requirements for enforcement of this regulation.
- 93.3.3 **Records Retention:** Copies of the records required by Subsection 93.3.1 (Record Keeping Requirements) of this Regulation shall be retained for at least one year.

93.4 Test Methods

93.4.1 Stabilization Test Methods For UNPAVED Shoulders And Medians of PAVED Roads:

93.4.1.1 OPACITY Test Method: The purpose of this test method is to estimate the percent OPACITY of FUGITIVE DUST plumes caused by vehicle movement on unpaved road shoulders and medians of PAVED roads. This method can only be conducted by an individual who has received certification as a qualified observer.

- (a) Step 1: Stand at least 20 feet from the FUGITIVE DUST source in order to provide a clear view of the EMISSIONS with the sun oriented in the 140-degree sector to the back. Following the above requirements, make OPACITY observations so that the line of vision is approximately perpendicular to the dust plume and wind direction. If multiple plumes are involved, do not include more than one plume in the line of sight at one time.
- (b) Step 2: Record the FUGITIVE DUST source location, source type, method of control used, if any, observer's name, certification data and affiliation, and a sketch of the observer's position relative to the FUGITIVE DUST source. Also, record the time, estimated distance to the FUGITIVE DUST source location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), observer's position to the FUGITIVE DUST source, and color of the plume and type of background on the visible EMISSION observation form both when OPACITY readings are initiated and completed.
- (c) Step 3: Make OPACITY observations, to the extent possible, using a contrasting background that is perpendicular to the line of vision. Make OPACITY observations approximately 3 feet above the surface from which the plume is generated. Note that the observation is to be made at only one visual point upon generation of a plume, as opposed to visually tracking the entire length of a dust plume as it is created along a surface. Make two observations per vehicle, beginning with the first reading at zero seconds and the second reading at five seconds. The zero-second observation should begin immediately after a plume has been created above the surface involved. Do not look continuously at the plume but, instead, observe the plume briefly at zero seconds and then again at five seconds.

- (d) Step 4: Record the OPACITY observations to the nearest 5% on an observational record sheet. Each momentary observation recorded represents the average OPACITY of EMISSIONS for a 5-second period. While it is not required by the test method, EPA recommends that the observer estimate the size of vehicles which generate dust plumes for which readings are taken (e.g. mid-size passenger car or heavy-duty truck) and the approximate speeds the vehicles are traveling when readings are taken.
- (e) Step 5: Repeat Step 3 (Subsection 93.4.1.1 (c) of this Regulation) and Step 4 (Subsection 93.4.1.1 (d) of this Regulation) until you have recorded a total of 12 consecutive OPACITY readings. This will occur once six vehicles have driven on the source in your line of observation for which you are able to take proper readings. The 12 consecutive readings must be taken within the same period of observation but must not exceed 1 hour. Observations immediately preceding and following interrupted observations can be considered consecutive.
- (f) Step 6: Average the 12 OPACITY readings together. If the average OPACITY reading equals 20% or lower, the source is in compliance with the OPACITY standard described in Section 93 of these Regulations.

93.4.1.2 Silt Loading Test Method: The purpose of this test method is to estimate the silt loading of the representative surfaces of dust palliative and untreated shoulders and medians of PAVED roads. The higher the silt loading, the greater the amount of fine dust particles that are entrained into the atmosphere when vehicles drive on unpaved shoulders and medians of PAVED roads.

- (a) Equipment:
 - (1) A set of sieves with the following openings: 4 millimeters (ASTM No. 5), 2 millimeters, (ASTM No. 10), 1 millimeter (ASTM No. 18), 0.5 millimeter (ASTM No. 35) and 0.25 millimeter (ASTM No. 60), (or a set of standard/commonly available sieves), a lid, and collector pan.
 - (2) Equipment necessary to collect a sample of material from the surface of the subject area. (e.g., a small whisk broom or paintbrush with bristles no longer than 1.5 inches, dustpan, spatula, shallow container, sealable plastic bags.)

- (3) Equipment necessary to complete field analysis of material. (e.g., weighting scale with half ounce increments, calculator, writing material.)
- (b) Step 1: Look for a representative surface within four (4) feet of the edge of the pavement. [Only collect samples from surfaces that are not damp due to precipitation or dew. This statement is not meant to be a standard in itself for dampness where watering is being used as a CONTROL MEASURE. It is only intended to ensure that surface testing is done in a representative manner.] Gently press the edge of a dustpan into the surface to mark an area that is 1 square foot. Collect a sample of loose surface material using a whiskbroom or brush and slowly sweep the material into the dustpan, minimizing escape of dust particles. Use a spatula or similar device to lift heavier elements such as gravel. Only collect dirt/gravel to an approximate depth of 3/8 inch in the 1 square foot area. If you reach a hard, underlying subsurface that is less than 3/8 inch in depth, do not continue collecting the sample by digging into the hard surface. In other words, you are only collecting a surface sample of loose material down to 3/8 inch. In order to confirm that samples are collected to 3/8 inch in depth, a wooden dowel or other similar narrow object at least one foot in length can be laid horizontally across the survey area while a ruler is held perpendicular to the dowel.
- At this point, you can choose to place the sample collected into a plastic bag or container and return to the DAQM facilities to complete the remaining steps or take it to an independent laboratory for silt loading analysis. A reference to the procedure the laboratory is required to follow is at the end of this section.
- (c) Step 2: Place a scale on a level surface. Place a lightweight container on the scale. Zero the scale with the weight of the empty container on it.
- (d) Step 3: Stack a set of sieves in order according to the size openings specified above, beginning with the largest size opening (4 mm) at the top. Place a collector pan underneath the bottom (0.25 mm) sieve.

- (e) Step 4: Carefully pour the sample into the sieve stack, minimizing escape of dust particles by slowly brushing material into the stack with a whiskbroom or brush, (on windy days, use the trunk or door of a car as a wind barricade). Cover the stack with a lid. Lift up the sieve stack and shake it vigorously up, down and sideways or place on a powered shaker for at least 1 minute.
- (f) Step 5: Remove the lid from the stack and disassemble each sieve separately, beginning with the top sieve. As you remove each sieve, examine it to make sure that all of the material has been sifted to the finest sieve through which it can pass; e.g., material in each sieve (besides the top sieve that captures a range of larger elements) should look the same size. If this is not the case, re-stack the sieves and collector pan, cover the stack with the lid, and shake it again for at least 1 minute (you only need to reassemble the sieve(s) that contain material, which requires further sifting).
- (g) Step 6: After disassembling the sieves and collector pan, slowly sweep the material from the collector pan into the empty container calibrated on the scale in Step 2 (Subsection 93.4.1.2(c)). Take care to minimize escape of dust particles. You do not need to do anything with material captured in the sieves; only the collector pan. Weigh the container with the material from the collector pan and record its weight.
- (h) Step 7: Multiply the resulting weight by 0.38. The resulting number is the estimated silt loading.
- (i) Step 8: Select another two representative surfaces of the unpaved road shoulder or median and repeat this test method. Once you have calculated the silt loading of the 3 samples collected, average your results together.
- (j) Step 9: Examine Results. If the average silt loading is less than 0.33 oz/ft², the surface is stable.

- (k) Independent Laboratory Analysis: You may choose to collect 3 samples from the source, according to Step 1 (Subsection 93.4.1.2 (b) of this Regulation), and send them to an independent laboratory for silt loading analysis rather than conduct the sieve field procedure. If so, the test method the laboratory is required to use is:

"Procedures For Laboratory Analysis Of Surface/Bulk Loading Samples", (Fifth Edition, Volume I, Appendix C.2.3 "Silt Analysis", 1995), AP-42, Office of Air Quality Planning & Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina

93.4.1.3 **GRAVEL DEPTH AND SILT CONTENT TEST METHOD:** The purpose of this two (2) part test method is to estimate the gravel depth and silt content of graveled road shoulders and medians of PAVED roads. Two (2) inches of gravel are required to prevent vehicle tires from digging through the gravel. The higher the silt content in the top inch of the gravel, the greater the amount of fine dust particles that are entrained into the atmosphere when vehicles drive on gravel-stabilized shoulders.

- (a) Equipment necessary to collect a sample of material from the surface of the subject area, including a sampling device one (1) foot by one (1) foot by one (1) inch deep, and other equipment such as, a small whisk broom or paintbrush with bristles no longer than 1.5 inches, dustpan, spatula, shallow container, sealable plastic bags, ruler, and wood dowel or similar straight edge device.
- (b) Step 1: Look for a section within four (4) feet of the edge of pavement that has an existing gravel surface that appears representative of the gravel shoulder. Using the spatula, remove the gravel from a three (3) to five (5) inch diameter area to the depth of the applied gravel surface. Make sure that the removed gravel is placed well away from the cleared area. Place a wooden dowel or other similar narrow object across the cleared survey area, and measure, perpendicular to the narrow object, to depth of the cleared area to determine the depth of the gravel material. If the depth of the gravel material is less than two (2) inches, the area fails and is not considered stable. If the depth of the gravel material is two (2) inches or greater, go to Step 2 (Subsection 93.4.1.3 (c) of this Regulation).

- (c) Step 2. Using the one (1) foot by one (1) foot by one (1) inch deep sampling frame, gently press the edges of the frame into the road shoulder surface to a depth of one (1) inch. Collect the sample of loose surface material using the whiskbroom, brush, spatula, and dustpan to collect the material into the sample bag, minimizing escape of dust particles. Collect all material to a one (1) inch depth in the one (1) square foot sampling frame.
- (d) Step 3. Repeat Steps 1 and 2 to obtain two (2) additional samples for a total of three (3) samples. In the event any sampled location is found to have less than (2) inches of gravel under Step 1, the shoulder is considered to be unstable. Do not proceed with additional sampling.
- (e) Step 4. Laboratory Analysis: Samples collected from this source, according to Step 3 (Subsection 93.4.1.3 (d) of this Regulation), are sent to a laboratory for silt content analysis. The test method the laboratory is required to use is:
 - i. Wet screen the entire sample through a one (1) inch sieve.
 - ii. For all material passing through the one (1) inch sieve, use ASTM No. 200 wet Sieve Method to determine the percentage content of silt.
- (f) Step 5: Examine Results. Average the silt content for the (3) samples. If the average silt content of the three samples is equal to or less than or six (6) percent, the surface is stable.

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June 3, 2003; July 1, 2004.

CLARK COUNTY
AIR QUALITY REGULATIONS

**SECTION 94 – PERMITTING AND DUST CONTROL FOR
CONSTRUCTION ACTIVITIES**

94.1 Purpose.

94.1.1 The purpose of this section of the Air Quality Regulations is:

- (a) To limit the EMISSION of PARTICULATE MATTER into the AMBIENT AIR by preventing, controlling, and mitigating FUGITIVE DUST from CONSTRUCTION ACTIVITIES; and
- (b) To establish FUGITIVE DUST control standards for Clark County, define reasonable precautions for the prevention and control of FUGITIVE DUST from all CONSTRUCTION ACTIVITIES and to establish thresholds for enforcement of these standards.

94.2 Applicability.

94.2.1 This section of the Air Quality Regulations applies to all CONSTRUCTION ACTIVITIES that disturb or have the potential to disturb soils and that emit or have the potential to emit particulate matter into the atmosphere. This section covers the requirements for a Dust Control Permit and a Dust Mitigation Plan as well as the application procedures.

94.2.2 For the purpose of this Regulation, CONSTRUCTION ACTIVITIES include, but are not limited to, the following practices:

- (a) Land clearing, maintenance, and land cleanup using machinery;
- (b) soil and rock excavation or removal;
- (c) soil or rock hauling;
- (d) soil or rock crushing or screening;
- (e) filling, compacting, stockpiling and grading;
- (f) explosive blasting;
- (g) demolition;
- (h) implosion;

- (i) handling of building materials capable of entrainment in air (e.g., sand, cement powder);
- (j) abrasive blasting;
- (k) concrete, stone, and tile cutting;
- (l) mechanized trenching;
- (m) initial landscaping;
- (n) operation of motorized machinery;
- (o) driving vehicles on a CONSTRUCTION site; and
- (p) establishing and/or using staging areas, parking areas, material storage areas, or access routes to or from a CONSTRUCTION site.

94.2.3 This regulation shall not apply to operation of emission units or activities permitted under any other section of the Air Quality Regulations, with the specific exception that any CONSTRUCTION ACTIVITIES that occur at such facilities and the land area that Various Location Operating Permits are located on shall be subject to this regulation. In all permits issued under the Air Quality Regulations the provisions of this section shall be considered as part of a BACT determination.

94.2.4 This regulation shall not apply to NORMAL FARM CULTURAL PRACTICES and existing equestrian facilities that are in compliance with zoning requirements.

94.2.5 This regulation shall not apply to emergency activities that may disturb the soil, conducted by any utility or government agency in order to prevent public injury or restore critical utilities to functional status.

94.3 **Definitions.**

94.3.1 For the purpose of this section of the Air Quality Regulations, terms listed in this subsection have the meanings ascribed.

94.3.2 **Best Available Control Measures (BACM):** means those control measures that are the best available with current technology for reducing or eliminating the release of particulate matter into the atmosphere from construction activities. These include but are not limited to all measures listed in the Construction Activities Dust Control Handbook as Best Management Practices, any control measure required by a Corrective Action Order, and any other control measures required by the Control Officer.

94.3.3 **Construction Activities Dust Control Handbook:** means the reference manual used to complete a Dust Control Permit and a Dust Mitigation Plan, and contains a listing of the Best Management Practices, copies of

which are on file in the office of the Clark County Department of Air Quality and Environmental Management.

- 94.3.4 Department or DAQEM: means the Clark County Nevada, Department of Air Quality and Environmental Management.
- 94.3.5 Dust Mitigation Plan: means an attachment to a Dust Control Permit that lists all the Construction Activities that shall occur and the Best Management Practices that shall be used, to mitigate dust at a permitted site. Upon approval of the application the Dust Mitigation Plan becomes an enforceable part of the Dust Control Permit.
- 94.3.6 Gravel: means a mineral or rock aggregate ranging in size from 0.25 inch to 3 inch on its longest dimension that is either natural or the product of a mineral processing operation and contains no more than 6% silt, by weight.
- 94.4 **Permits Required, Exemptions from Required Permit and Responsibility when Exempt.**
- 94.4.1 Prior to engaging in any CONSTRUCTION ACTIVITIES, the property OWNER AND/OR OPERATOR, who is the owners designee shall apply for and obtain a DUST CONTROL PERMIT from the Clark County Department of Air Quality and Environmental Management.
- 94.4.2 A DUST CONTROL PERMIT shall not be required for soil disturbing or CONSTRUCTION ACTIVITIES less than 0.25 acre in overall area, mechanized trenching less than one hundred (100) feet in length, or for mechanical demolition of any structure smaller than one thousand (1,000) square feet.
- 94.4.3 The following activities shall not require a DUST CONTROL PERMIT:
- (a) Landscaping by an individual at his/her place of residence;
 - (b) EMERGENCY maintenance activities conducted by government agencies on publicly maintained roads, road shoulders, right-of-ways and on public flood control facilities; or,
 - (c) Weed removal or dust palliative application projects conducted solely for the purpose of compliance with weed abatement or vacant land dust control regulations, wherein no grade elevation changes, no soil or rock is imported or exported, or no cut and fill operations occur. Importing of gravel or rock for use as a dust palliative is allowed under this subsection.

94.5 Permit Applications.

- 94.5.1 Application for issuance or renewal of a DUST CONTROL PERMIT shall be made on a form and in a manner prescribed by the CONTROL OFFICER.
- 94.5.2 Each application shall be accompanied by payment of a fee in accordance with Section 18.
- 94.5.3 Public agency maintenance projects, performed by that agency's employees, may be eligible for a waiver of permit fees upon approval of the CONTROL OFFICER.
- 94.5.4 All applications for a DUST CONTROL PERMIT shall include a Dust Mitigation Plan with appropriate CONTROL MEASURES from the Construction Activities Dust Control Handbook for every CONSTRUCTION ACTIVITY to be conducted. Other CONTROL MEASURES that are at least as effective as CONTROL MEASURES contained in the Construction Activities Dust Control Handbook may be implemented provided they meet the criteria outlined in Section 2 of the introduction to the Best Management Practices section of the handbook and with the approval of the CONTROL OFFICER.
- 94.5.5 An application for a DUST CONTROL PERMIT for a CONSTRUCTION project ten (10) acres or more in area, for trenching activities one (1) mile or greater in length, or for structure demolition using implosive or explosive blasting techniques, shall be required to submit a detailed supplement to the Dust Mitigation Plan. This supplement shall be in the form of a written report and shall, at minimum, detail the project description, the area and schedule of the phases of land disturbance, the Control Measures and the Contingency Measures to be used for all CONSTRUCTION ACTIVITIES. This supplement shall become part of the DUST CONTROL PERMIT as an enforceable permit condition.
- 94.5.6 An application for a DUST CONTROL PERMIT that includes demolition of a structure One thousand (1,000) square feet or greater in area or explosive blasting of rock or soil, shall include the appropriate supplemental form that is provided in Attachment 1 of the Construction Activities Dust Control Handbook for each activity. These forms shall become part of the DUST CONTROL PERMIT as an enforceable permit condition.
- 94.5.7 An application for a Dust Control Permit for a Construction project of fifty (50) acres or more in area shall contain an actual soils analysis of the entire project. The soils analysis shall use the appropriate ASTM test method to determine soil types. If the soils analysis identifies two or more soil types, the area of each soil type shall be shown on a map of the project. A copy of the map shall be included in the application for the Dust Control Permit. The soils analysis shall utilize at least one (1) sample taken from the top one (1) foot of soil for each soil type identified. The

soils analysis shall use the appropriate ASTM test to determine the silt content and optimum moisture of the sample(s). The application for the Dust Control Permit shall contain the particulate emission potential (PEP) for each soil type identified calculated from the results of the soils analysis and the Silt Content vs. Optimum Moisture Content Chart (figure 2) in the Construction Activities Dust Control Handbook. The choice of Best Management Practices for the Dust Mitigation Plan may be different for each soil type area, if not, the highest PEP identified on the project shall be used.

94.5.8 The application shall be signed by the property owner or the owner's designee as listed on the "Owner's Designee for Dust Control Permit for Construction Activities" form.

94.5.9 Upon approval, the completed DUST CONTROL PERMIT application, Dust Mitigation Plan and related maps and forms shall become a part of the DUST CONTROL PERMIT.

94.6 **DUST CONTROL PERMIT Requirements.**

94.6.1 Issuance or renewal of each DUST CONTROL PERMIT requires payment of a DUST CONTROL PERMIT fee in accordance with Section 18.

94.6.2 A DUST CONTROL PERMIT is to be granted subject to the right of inspection of such affected land without prior notice by the CONTROL OFFICER.

94.6.3 The permit shall be granted subject to, but not limited to, the following conditions:

- (a) The permittee is responsible for ensuring that all PERSONS abide by the conditions of the permit and these regulations;
- (b) The permittee is responsible for supplying complete copies of the DUST CONTROL PERMIT including the Dust Mitigation Plan, to all project contractors and subcontractors; and,
- (c) The permittee is responsible for all permit conditions, until a Certificate of Project Completion (form DCP 08 see Attachment 1) has been submitted by the permittee and approved by the Control Officer.

94.6.4 The signature of the OWNER AND/OR OPERATOR who is the OWNER's designee on the DUST CONTROL PERMIT shall constitute agreement to accept responsibility for meeting the conditions of the permit and for ensuring that Best Available Control Measures are implemented throughout the project site.

- 94.6.5 Requirements and conditions of the DUST CONTROL PERMIT shall be made a part of the specifications of the CONSTRUCTION contract between the owner and prime contractor and contracts between the prime contractor and applicable subcontractors. Said contracts must provide a monetary allowance for any dust control options specified in the Dust Mitigation Plan. The amount of the allowance may be specified either by the OWNER, competitively bid, or negotiated by and amongst the parties.
- 94.6.6 Projects less than 0.25 acres in area under common control that are either contiguous or separated only by a public or private roadway and that cumulatively equal or exceed 0.25 acre in area are also required to obtain a DUST CONTROL PERMIT. These projects are required to meet all DUST CONTROL PERMIT requirements based on cumulative area. All contiguous projects under common control may be required to obtain and operate under a single permit, at the discretion of the CONTROL OFFICER.
- 94.6.7 A DUST CONTROL PERMIT shall be required for routine, public agency road maintenance, road shoulder maintenance, flood control facility maintenance, and maintenance activities that disturb soil and are capable of causing FUGITIVE DUST. Such Dust Control Permits may be issued based upon written monthly, quarterly, semi-annual, or annual schedules of work for routine maintenance activities. Such permits shall include a Dust Mitigation Plan listing all activities to be performed that may disturb the soil, and shall include BEST MANAGEMENT PRACTICES for all these activities. Public agencies shall quantify miles and acres of maintenance activities to be performed under the conditions of the Dust Control Permit.
- 94.6.8 The permit holder shall notify the DEPARTMENT OF AIR QUALITY AND ENVIRONMENTAL MANAGEMENT in writing within ten (10) days following the cessation of active operations on all or part of a CONSTRUCTION site when cessation will extend thirty (30) days or longer.
- 94.6.9 A Dust Control Permit is valid for one calendar year from the date of issuance.
- 94.6.10 A complete copy of the Dust Control Permit shall be kept on the project site at all times that Construction Activities occur and made available upon request of the Control Officer.
- 94.7 **General and Administrative Standards.**
- 94.7.1 Anyone engaging in CONSTRUCTION ACTIVITIES on a site having a Dust Control Permit shall be subject to all conditions set forth in that permit. Failure to comply with any condition set forth in the permit shall be in violation of this section of the Air Quality Regulations.

- 94.7.2 The Construction Activities Dust Control Handbook, excluding all attachments, is adopted and made a part of this section of the Air Quality Regulation, as if it were fully set forth herein, except as amended by this Regulation.
- 94.7.3 **DUST CONTROL PERMIT: Restrictions on issuance; Suspension; Revocation; Requirement for Bond; Right to Appeal:**
- 94.7.3.1 Permits shall not be issued to an applicant having outstanding unpaid DAQEM fees and/or penalties, not under appeal.
- 94.7.3.2 If an OWNER AND/OR OPERATOR has three (3) Notices of Violation that have been adjudicated by the HEARING OFFICER at the same project for which the Dust Control Permit was issued, the CONTROL OFFICER or his/her representative may suspend or revoke the permit. Upon suspension or revocation of a permit, all activities that are authorized by that permit shall cease. The CONTROL OFFICER shall post notices of suspension or revocation conspicuously on the property involved. The notice shall state the reasons and indicate the date and time of suspension and/or revocation. The suspension or revocation shall remain in effect until such time as rescinded by the CONTROL OFFICER. If the permit has been suspended, the permit may be reinstated. If revoked, a new permit will not be issued until an application is made and fees paid in accordance with Section 18 of these regulations. The permittee shall have a right to hearing before the HEARING OFFICER within five (5) working days from date of issuance of the suspension or revocation. Alternatively, in such instances, the CONTROL OFFICER may require compliance with Subsection 94.7.6 for all operators of earth moving or soil disturbing equipment.
- 94.7.3.3 If during any 180 day period an OWNER AND/OR OPERATOR has three (3) NOTICES OF VIOLATION that have been adjudicated by the HEARING OFFICER for the same construction site, the CONTROL OFFICER shall require the posting of a surety bond to ensure implementation of the mitigation measures set forth in the approved Dust Control Permit for the subject site. If an OWNER AND/OR OPERATOR has two (2) or more NOTICES OF VIOLATION that have been adjudicated by the HEARING OFFICER from the DAQEM for: failure to obtain a Dust Control Permit; failure to implement BEST MANAGEMENT PRACTICES; or failure to comply with a Corrective Action Order, the CONTROL OFFICER may, as a condition of obtaining or maintaining a Dust Control Permit, issue a Corrective Action Order requiring the OWNER AND/OR OPERATOR to post a surety bond to ensure the implementation of the mitigation measures set forth in said Dust Control Permits.

The OWNER AND/OR OPERATOR shall provide the CONTROL OFFICER the surety bond executed in a form acceptable to the CONTROL OFFICER for the approved Dust Control Permit as the principal with a corporation authorized to transact surety business in the State of Nevada. The OWNER AND/OR OPERATOR shall condition the surety bond upon the faithful performance of all other conditions of the permit and faithful compliance with the provisions of these regulations. The surety bond shall remain in effect until the construction activity specified in the said Dust Control Permit is complete and the department closes the said Dust Control Permit. The amount of each bond required by this section shall equal the estimated cost of implementing the dust CONTROL MEASURES set forth in the approved Dust Control Permit plus an additional 10% of the estimated cost to cover contingencies, as determined by the DAQEM.

94.7.3.4 Any PERSON aggrieved by a decision of the CONTROL OFFICER pursuant to this section may appeal in accordance with Section 7 of these Regulations.

94.7.4 **Corrective Action Orders (CAO) and Notices of Violation (NOV).**

94.7.4.1 If it is found that any provision of Section 94, a DUST CONTROL PERMIT, or a Dust Mitigation Plan has not been complied with, the CONTROL OFFICER may issue a Corrective Action Order to any OWNER AND/OR OPERATOR or other PERSON that they may be in violation of these regulations and said finding shall be corrected within a specified period of time, dependent upon the scope and extent of the problem.

94.7.4.2 The failure to comply with the corrective measures of a Corrective Action Order within the specified period of time shall be a violation of this section of the Air Quality Regulations.

94.7.4.3 Regardless of whether a Corrective Action Order has been issued, the CONTROL OFFICER may issue a Notice of Violation upon determination that the OWNER AND/OR OPERATOR is out of compliance with any provisions of this section of the Air Quality Regulations, a DUST CONTROL PERMIT, a Dust Mitigation Plan, or upon the failure to comply with a previously issued Corrective Action Order.

94.7.4.4 The CONTROL OFFICER, or his/her designee shall be further empowered to enter upon any said land where any loose soil or dust problem exists, and to take such remedial and corrective action as may be deemed appropriate to cope with and relieve, reduce, or remedy the loose soil, dust situation or condition, when the OWNER AND/OR OPERATOR fails to do so.

- 94.7.4.4.1 Any cost incurred in connection with any such remedial or corrective action by the Department of Air Quality and Environmental Management or any PERSON acting for the Department of Air Quality and Environmental Management shall be reimbursed by the land OWNER AND/OR OPERATOR. If these costs are not reimbursed the CONTROL OFFICER may request a lien be placed on the subject lands that shall remain in full force and effect until any and all such costs have been collected.
- 94.7.4.5 Any additional CONTROL MEASURES prescribed by the CONTROL OFFICER in a Corrective Action Order, issued to the holder of a Dust Control Permit, shall become a part of that permit's Dust Mitigation Plan.
- 94.7.5 **Dust Control Monitor.**
- 94.7.5.1 Any CONSTRUCTION project having 50 acres or more of actively disturbed soil at any given time shall be required by the CONTROL OFFICER to have in place an individual designated as the Dust Control Monitor with full authority to ensure that dust CONTROL MEASURES are implemented, including inspections, record keeping, deployment of resources, and shut-down or modification of CONSTRUCTION ACTIVITIES as needed. This individual shall be listed on the Construction Site Dust Control Monitor form provided in Attachment 1 of the Construction Activities Dust Control Handbook.
- 94.7.5.2 A Dust Control Monitor shall also be required for individually permitted projects that have less than fifty (50) acres of actively disturbed soil if they are:
- (a) under common control and are either contiguous or separated by a public or private roadway and cumulatively have fifty (50) acres or more of actively disturbed soil; or
 - (b) under common control and not contiguous, but are contained within a common master-planned community and cumulatively have fifty (50) acres or more of disturbed soil.
- 94.7.5.3 The Dust Control Monitor shall be present at all times CONSTRUCTION ACTIVITIES occur on the project site and shall devote the majority of his/her time specifically to managing dust prevention and control on the site.
- 94.7.5.4 The requirement for a Dust Control Monitor shall lapse when:
- (a) the area of actively disturbed soil becomes less than fifty (50) acres;
 - (b) the previously disturbed areas have been stabilized in accordance with the requirements of these Regulations; and,
 - (c) the stabilization has been approved and the acreage verified by the CONTROL OFFICER.

- 94.7.5.5 A Dust Control Monitor shall be considered qualified when he/she has met the following minimum qualifications:
- (a) successfully completed the Basic Dust Control Class;
 - (b) successfully completed the Dust Control Monitor Class;
 - (c) two years of experience in the CONSTRUCTION industry; and,
 - (d) successfully completed a course that certifies him/her in Visual Emissions Evaluation (VEE) that has been approved or is conducted by the CONTROL OFFICER.
- 94.7.5.6 For a Dust Control Monitor to maintain his/her certification he/she must successfully complete the Dust Control Monitor class at least once every three years.
- 94.7.6 **Dust Control Class.**
- 94.7.6.1 The CONSTRUCTION site superintendent or other designated on-site representative of the project developer and all construction site supervisors and foremen shall be required to have successfully completed a Clark County Department of Air Quality and Environmental Management Dust Control Class.
- 94.7.6.2 Water truck and water pull driver(s) for each CONSTRUCTION project shall be required to have successfully completed a Clark County Department of Air Quality and Environmental Management Dust Control Class.
- 94.7.6.3 All individuals required to attend and successfully complete the Dust Control Class shall do so at least once every three years.
- 94.7.6.4 CONSTRUCTION site workers and equipment operators, may be required to attend a Dust Control Class as a remedial or corrective measure.
- 94.7.7 Signage Requirements.
- 94.7.7.1 For each Dust Control Permit issued where the project site is less than or equal to ten (10) acres, or for trenching projects between one hundred (100) feet and one (1) mile in length, or for demolition of a structure totaling one thousand (1,000) square feet or more, the permittee shall install a sign on the project site prior to commencing CONSTRUCTION ACTIVITY that is visible to the public and measures, at minimum, four (4) feet wide by four (4) feet high, conforming to Department policy on Dust Control Permit Design and Posting of Signage listed in Attachment 4 of the Construction Activities Dust Control Handbook.

- 94.7.7.2 For each Dust Control Permit issued where the project site is over ten (10) acres, or for trenching projects aggregating one (1) mile or greater in length, the permittee shall install a sign on the project site prior to commencing CONSTRUCTION ACTIVITY and visible to the public and measures, at minimum, eight (8) feet wide by four (4) feet high, conforming to Department policy on Dust Control Permit Design and Posting of Signage listed in Attachment 4 of the Construction Activities Dust Control Handbook.
- 94.7.7.3 Projects shorter than two (2) weeks in duration may request a waiver of the requirement of posting a DUST CONTROL PERMIT Sign.
- 94.7.8 **Record Keeping.**
- 94.7.8.1 On a site having a Dust Control Permit a written record of self inspection shall be made each day soil disturbing work is conducted. The "Record of Daily Dust Control" form provided in Appendix A of the Construction Activities Dust Control Handbook, or other written record that provides at a minimum the same information, shall be completed.
- 94.7.8.2 Records of CONSTRUCTION site self inspections shall be kept for a minimum of one (1) year or for six (6) months beyond the project duration, whichever is longer. Self inspection records include daily inspections for crusted or damp soil, trackout conditions and cleanup measures, daily water usage, DUST SUPPRESSANT application records, etc.
- 94.7.8.3 For CONTROL MEASURES involving chemical or organic soil stabilization, records shall indicate the type of product applied, vendor name, label instructions for approved usage, and the method, frequency, concentration, and quantity of application.
- 94.8 **Soil Stabilization Standards.**
- 94.8.1 All permittees, contractors, OWNERS, operators, or other PERSONS involved in CONSTRUCTION ACTIVITIES shall employ CONTROL MEASURES as set forth in the Construction Activities Dust Control Handbook.
- 94.8.2 One or a combination of the following methods shall be used to maintain dust control on all disturbed soils on Construction Sites and staging areas:
- (a) The soil shall be maintained in a sufficiently damp condition to prevent loose grains of soil from becoming dislodged when the disturbed soil is tested using the Drop Ball Test outlined in Subsection 94.12.5; or
 - (b) The soil shall be crusted over by application of water, as demonstrated by the Drop Ball Test outlined in Subsection 94.12.5; or

- (c) The soil shall be completely covered with clean gravel or treated with a DUST SUPPRESSANT approved by the CONTROL OFFICER, to the extent necessary to pass a Drop Ball Test outlined in Subsection 94.12.5.

94.8.3 When a CONSTRUCTION site or part thereof becomes inactive for a period of thirty (30) days or longer, long-term stabilization shall be implemented within ten (10) days following the cessation of active operations.

94.8.4 Stockpiles located within one hundred (100) yards of occupied buildings shall not be constructed over eight (8) feet in height.

94.8.5 Stockpiles over eight (8) feet high shall have a road bladed to the top to allow water truck access or shall have a sprinkler irrigation system installed, used and maintained.

94.9 **Best Available Control Measures (BACM)**

94.9.1 Any PERSON who engages in a Construction Activity as defined in this regulation shall employ BACM for the purpose of dust control.

94.9.2 All CONTROL MEASURES that are necessary to maintain soil stability as well as those listed in an approved Dust Mitigation Plan, shall be implemented twenty four (24) hours a day, seven (7) days a week, until the permit is closed in accordance with Subsection 94.6.3(c).

94.9.3 In the event there are wind conditions that cause FUGITIVE DUST EMISSIONS; in excess of 20% OPACITY using the Time Averaged Method or Intermittent Emissions Method, in excess of 50% OPACITY using the Instantaneous Method, or one hundred (100) yards in length from the point of origin, in spite of the use of Best Available CONTROL MEASURES, all CONSTRUCTION ACTIVITIES that may contribute to these emissions shall immediately cease. Water trucks and water pulls shall continue to operate under these circumstances, unless wind conditions are such that the continued operation of watering equipment cannot reduce FUGITIVE DUST EMISSIONS or that continued equipment operation poses a safety hazard.

94.9.4 If a Dust Control Permit is not required, the OWNERS, operators, or any other PERSON involved in CONSTRUCTION ACTIVITIES shall employ BEST MANAGEMENT PRACTICES, as set forth in the Construction Activities Dust Control Handbook and comply with the soil stabilization standards listed in Subsections 94.8 and emissions standards listed in Subsection 94.11.

94.10 **CONSTRUCTION ACTIVITIES Violations.**

- 94.10.1 Any of the following circumstances constitute a violation of the Clark County Air Quality Regulations:
- (a) Failure to obtain an approved DUST CONTROL PERMIT before engaging in activities that disturb or have the potential to disturb soils and/or cause or have the potential to cause FUGITIVE DUST to enter the air.
 - (b) Failure to obtain an approved DUST CONTROL PERMIT for all areas subject to CONSTRUCTION ACTIVITIES.
 - (c) Conducting a CONSTRUCTION ACTIVITY as defined by Subsection 94.2 for which no specified control option is indicated in the approved DUST CONTROL PERMIT or the Dust Mitigation Plan.
 - (d) Failure to perform any duty to allow or carry out an inspection, entry, or monitoring activity required by the Department of Air Quality and Environmental Management.
 - (e) Failure to renew or obtain a new permit, prior to a DUST CONTROL PERMIT expiring, provided the site does not meet the exemption requirements for a DUST CONTROL PERMIT as defined in Subsection 94.4.2.
 - (f) Failure to implement any item that is listed as a "Requirement" in the Best Management Practices section of the Construction Activities Dust Control Handbook for an applicable Construction Activity.
 - (g) Failure to implement any BEST MANAGEMENT PRACTICE listed in an approved DUST CONTROL PERMIT / Dust Mitigation Plan.
 - (h) Failure to maintain static (not actively worked) project soils with adequate surface crusting to prevent wind erosion as measured by test method "Soil Crust Determination (The Drop Ball Test)" in Subsection 94.12.5, or alternative control measures approved in the Dust Mitigation Plan.
 - (i) Failure to comply with any record keeping requirements of this section.
 - (j) Failure to maintain project haul routes or haul roads in a stable condition as measured by the Intermittent Emissions test method outlined in Section 94.12.3.
 - (k) Failure to have a Dust Control Monitor in place, per Subsection 94.7.5, for a Construction project.
 - (l) Allowing FUGITIVE DUST emissions to exceed the standards set forth in Subsection 94.11.1 through 94.11.4.
 - (m) Using a dry rotary brush or blower device without sufficient water to limit emissions per Subsection 94.11.5.
 - (n) Allowing mud or dirt to be tracked out onto a paved road that exceed the standards set forth in Subsection 94.11.6.

- (o) Failure to comply with any other provision of this section.

94.11 Emission Standards.

- 94.11.1 No PERSON shall cause or permit the handling, transporting, or storage of any material in a manner that allows visible emissions of particulate matter to exceed: 20% OPACITY using the Time Averaged Method or the Intermittent Emissions Method; 50% OPACITY using the Instantaneous Method. These Test Methods are set forth in Subsection 94.12.
- 94.11.2 No PERSON shall cause or permit the handling, transporting, or storage of any material in a manner that allows a dust plume that extends one hundred (100) yards or more, horizontally or vertically, from the point of origin.
- 94.11.3 Where a DUST CONTROL PERMIT is required and has not been issued or in the event Best Available CONTROL MEASURES have not been fully implemented, no PERSON shall cause or permit the handling, transportation, or storage of any material in a manner that exceeds the limits listed in any one of the following:
 - (a) The limits set forth in Subsection 94.11.1; or
 - (b) Allow a dust plume to extend more than one hundred (100) feet, horizontally or vertically, from the point of origin; or
 - (c) Allow a dust plume to cross a property line.
- 94.11.4 Visible emissions from abrasive blasting shall be limited to no more than an average of 40% OPACITY for any period aggregating three (3) minutes in any sixty (60) minute period, utilizing the test method set forth in Subsection 94.12.
- 94.11.5 The use of dry rotary brushes and blower devices for removal of deposited mud/dirt trackout from a paved road is prohibited, unless sufficient water is applied to limit the visible emissions to an OPACITY of not greater than: 20% OPACITY using the Time Averaged Method or Intermittent Emissions Method; 50% OPACITY using the Instantaneous Method. These test methods are set forth in Subsection 94.12. The use of rotary brushes without water is prohibited.
- 94.11.6 Mud or dirt shall not be allowed to be tracked out onto a paved road where such mud or dirt extends fifty (50) feet or more in cumulative length from the point of origin or allow any trackout to accumulate to a depth greater than 0.25 inch. Notwithstanding the preceding, all accumulations of mud or dirt on curbs, gutters, sidewalks, or paved roads including trackout less than fifty (50) feet in length and 0.25 inch in depth, shall be cleaned and

maintained to eliminate emissions of Fugitive Dust. At a minimum all trackout must be cleaned up by the end of the workday or evening shift, as applicable.

94.12 **Test Methods**

94.12.1 Visual Determination of OPACITY of EMISSIONS from Sources of Visible EMISSIONS.

Applicability: This method is applicable for the determination of the OPACITY of EMISSIONS from sources of visible EMISSIONS. The Time Averaged Method requires averaging of visible EMISSION readings over a specific time period to determine the OPACITY of visible EMISSIONS. The Time Averaged Method is applicable to continuous EMISSIONS sources. The Intermittent Emissions Method requires averaging a set number of visible EMISSIONS readings to determine the OPACITY of visible EMISSIONS. The Intermittent Emissions Method is applicable to Intermittent EMISSIONS sources. The Instantaneous Method sets an OPACITY limit that shall not be exceeded at any time. The Instantaneous Method is applicable to any emissions source and is a non-federal requirement.

Principle: The OPACITY of EMISSIONS of a source of visible EMISSIONS is determined visually by an observer who has current certification approved by the Control Officer, as a qualified Visible EMISSIONS Evaluator, using US EPA Method 9.

Procedures: A qualified Visible EMISSIONS Evaluator shall use the procedures set forth in Subsections 94.12.2, 94.12.3, and 94.12.4 for visually determining the OPACITY of EMISSIONS.

94.12.2 Time Averaged Method: These procedures is for evaluating continuous FUGITIVE DUST EMISSIONS and are for the determination of the OPACITY of continuous FUGITIVE DUST EMISSIONS by a qualified observer. Continuous FUGITIVE DUST EMISSIONS sources include activities that produce emissions continuously during operations such as earthmoving, grading, and trenching. Emissions from these types of continuous activities are considered continuous even though speed of the activity may vary and Emissions may be controlled to 100%, producing no visible emissions, during parts of the operation. The qualified observer should do the following:

- (a) **Position:** Stand at a position at least twenty (20) feet from the FUGITIVE DUST source in order to provide a clear view of the EMISSIONS with the sun oriented in the 140° sector to the back. Consistent as much as possible with maintaining the above requirements, make OPACITY observations from a position such that the line of sight is approximately perpendicular to the plume and wind direction. The observer may follow the FUGITIVE DUST plume generated by mobile earth moving equipment, as long as the sun

remains oriented in the 140° sector to the back. As much as possible, do not include more than one plume in the line of sight at one time.

- (b) **Field Records:** Record the name of the site, FUGITIVE DUST source type (e.g., earthmoving, grading, trenching), method of control used, if any, observer's name, certification data and affiliation, and a sketch of the observer's position relative to the FUGITIVE DUST source. Also, record the time, estimated distance to the FUGITIVE DUST source location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), observer's position relative to the FUGITIVE DUST source, and color of the plume and type of background on the visible EMISSION observation when OPACITY readings are initiated and completed.
- (c) **Observations:** Make OPACITY observations, to the extent possible, using a contrasting background that is perpendicular to the line of sight. Make OPACITY observations at a point just beyond where material is no longer being deposited out of the plume (normally three (3) feet above the surface from which the plume is generated). The initial observation should begin immediately after a plume has been created above the surface involved. Do not look continuously at the plume, but instead observe the plume momentarily at 15-second intervals. For FUGITIVE DUST from earthmoving equipment, make OPACITY observations at a point just beyond where material is not being deposited out of the plume (normally three (3) feet above the mechanical equipment generating the plume).
- (d) **Recording Observations:** Record the OPACITY observations to the nearest 5% every fifteen (15) seconds on an observational record sheet. Each momentary observation recorded represents the average OPACITY of EMISSIONS for a fifteen (15) second period. If a multiple plume exists at the time of an observation, do not record an OPACITY reading. Mark an "x" for that reading. If the equipment generating the plume travels outside of the field of observation, resulting in the inability to maintain the orientation of the sun within the 140° sector or if the equipment ceases operating, mark an "x" for the fifteen (15) second interval reading. Readings identified as "x" shall be considered interrupted readings.
- (e) **Data Reduction For Time-Averaged Method:** For each set of twelve (12) or twenty four (24) consecutive readings, calculate the appropriate average OPACITY. Sets shall consist of consecutive observations, however, readings immediately preceding and following interrupted readings shall be deemed consecutive and in no case shall two sets overlap, resulting in multiple violations.

94.12.3 **Intermittent EMISSIONS Method:** This procedure is for evaluating Intermittent FUGITIVE DUST EMISSIONS: This procedure is for the determination of the OPACITY of intermittent FUGITIVE DUST EMISSIONS by a qualified observer. Intermittent FUGITIVE DUST EMISSIONS sources include activities that produce

emissions intermittently such as screening, dumping, and stockpiling where predominant emissions are produced intermittently. The qualified observer should do the following:

- (a) **Position:** Stand at a position at least twenty (20) feet from the FUGITIVE DUST source in order to provide a clear view of the EMISSIONS with the sun oriented in the 140° sector to the back. Consistent as much as possible with maintaining the above requirements, make OPACITY observations from a position such that the line of sight is approximately perpendicular to the plume and wind direction. As much as possible, do not include more than one plume in the line of sight at one time.
- (b) **Field Records:** Record the name of the site, FUGITIVE DUST source type (e.g., pile, material handling, transfer, loading, sorting), method of control used, if any, observer's name, certification data and affiliation, and a sketch of the observer's position relative to the FUGITIVE DUST source. Also, record the time, estimated distance to the FUGITIVE DUST source location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), observer's position relative to the FUGITIVE DUST source, and color of the plume and type of background on the visible EMISSION observation when OPACITY readings are initiated and completed.
- (c) **Observations:** Make OPACITY observations, to the extent possible, using a contrasting background that is perpendicular to the line of sight. Make OPACITY observations at a point just beyond where material is no longer being deposited out of the plume (normally three (3) feet above the surface from which the plume is generated). Make two observations per plume at the same point, beginning with the first reading at zero (0) seconds and the second reading at five (5) seconds. The zero (0) second observation should begin immediately after a plume has been created above the surface involved.
- (d) **Recording Observations:** Record the OPACITY observations to the nearest 5% on an observational record sheet. Each momentary observation recorded represents the average OPACITY of EMISSIONS for a five (5) second period.
- (e) Repeat Subsection 94.12.3(c) of this Regulation and Subsection 94.12.3(d) of this Regulation until you have recorded a total of 12 consecutive OPACITY readings. This will occur once six intermittent plumes on which you are able to take proper readings have been observed. The 12 consecutive readings must be taken within the same period of observation but must not exceed 1 hour. Observations immediately preceding and following interrupted observations can be considered consecutive.
- (f) Average the 12 OPACITY readings together. If the average OPACITY reading equals 20% or lower, the source is in compliance with the averaged method OPACITY standard described in this Section.

- 94.12.4 Instantaneous Method: This is a non-federal procedure for evaluation of FUGITIVE DUST EMISSIONS: This procedure is for the instantaneous determination of the OPACITY of FUGITIVE DUST EMISSIONS by a qualified observer. This method is a Clark County local requirement and is not submitted as part of the applicable State Implementation Plan. The qualified observer should do the following:
- (a) Position: Stand at a position at least twenty (20) feet from the FUGITIVE DUST source in order to provide a clear view of the EMISSIONS with the sun oriented in the 140° sector to the back. Consistent as much as possible with maintaining the above requirements, make OPACITY observations from a position such that the line of sight is approximately perpendicular to the plume and wind direction. The observer may follow the FUGITIVE DUST plume generated by mobile earth moving equipment, as long as the sun remains oriented in the 140° sector to the back. As much as possible, do not include more than one plume in the line of sight at one time.
 - (b) Field Records: Record the name of the site, FUGITIVE DUST source type (e.g., earthmoving, grading, storage pile, material handling, transfer, loading, sorting), method of control used, if any, observer's name, certification data and affiliation, and a sketch of the observer's position relative to the FUGITIVE DUST source. Also, record the time, estimated distance to the FUGITIVE DUST source location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), observer's position relative to the FUGITIVE DUST source, and color of the plume and type of background on the visible EMISSION observation when OPACITY readings are initiated and completed.
 - (c) Observations: Make OPACITY observations, to the extent possible, using a contrasting background that is perpendicular to the line of sight. Make OPACITY observations at a point just beyond where material is no longer being deposited out of the plume (normally three (3) feet above the surface from which the plume is generated).
 - (d) Recording Observations: Record the OPACITY observations to the nearest 5%.
 - (e) Data Reduction For Instantaneous Regulations: Evaluate all observations for conformance with the instantaneous regulation.

94.12.5 Soil Crust Determination (The Drop Ball Test):

- (a) Drop a steel ball with a diameter of 0.625 (5/8th) inch and a mass ranging from 0.56-0.60 ounce from a distance of one (1) foot directly above the soil surface. If blowsand is present, clear the blowsand from the surfaces on which the soil crust test method is conducted. Blowsand is defined as thin deposits of loose uncombined grains covering less than 50% of a project site that have not originated from the representative surface being tested. If material covers a visible crust, which is not blowsand, apply the test method in Subsection 90.4.1.3 (Determination Of Threshold Friction Velocity) of this Regulation to the loose material to determine whether the surface is stabilized.

A sufficient crust is defined under the following conditions: once a ball has been dropped according to Subsection 90.4.1.1 of this Regulation, the ball does not sink into the surface, so that it is partially or fully surrounded by loose grains and, upon removing the ball, the surface upon which it fell has not been pulverized, so that loose grains are visible.

- (b) Randomly select each representative disturbed surface for the drop ball test by using a blind “over the shoulder” toss of a throwable object (e.g., a metal weight with survey tape attached). Using the point of fall as the lower left hand corner, measure a one (1) foot square area. Drop the ball three times within the 1-foot by 1-foot square survey area, using a consistent pattern across the survey area. The survey area shall be considered to have passed the Soil Crust Determination Test if at least two out of the three times that the ball was dropped, the results met the criteria in Subsection 90.4.1.1(a) of this Regulation. Select at least two other survey areas that represent a random portion of the overall disturbed conditions of the site, and repeat this procedure. If the results meet the criteria of Subsection 90.4.1.1(a) of this Regulation for all of the survey areas tested, then the site shall be considered to have passed the Soil Crust Determination Test and shall be considered sufficiently crusted.
- (c) At any given site, the existence of a sufficient crust covering one portion of the site may not represent the existence or protectiveness of a crust on another portion of the site. Repeat the soil crust test as often as necessary on each portion of the overall conditions of the site using the random selection method set forth in Subsection 90.4.1.1(b) of this Regulation for an accurate assessment.

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